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BALTIMORE, OCTOBER 8, 1908.

### HE WENT HOME.

He went back home in the South. He was so well pleased that he invested \$77,000 there in a way that will add to the attractions of the South for other exiles. He is J. B. Goode of St. Louis, and the story he tells on another page of this week's issue of the MANUFACTURERS' RECORD ought to be read by every other Southerner living in other parts of the country. Having been read it should induce a movement of thousands of enterprising men into the South, for the possibilities mentioned by Mr. Goode, attractive as they are, are but infinitesimal compared with the things that wait.

You all had better come home.

### TO DEVELOP TRUCKING.

President W. W. Finley of the Southern Railway Co. has sent a circular letter to the newspapers of the South, urging a vigorous campaign for the construction of good roads. This letter recalls the co-operation by the Southern Railway a few years ago in sending a good-roads train all over its system, carrying road-building machinery and expert road builders who gave object-lessons in improvement of highways. President Finley regards good roads as an essential element in diversification of Southern industries and agriculture. Diversification, too, has been urged again and again by Mr. M. V. Richards, land and industrial agent of the system, who in a recent address in Tennessee dwelt upon the benefits of the canneries to handle surplus fruit and vegetables, and pledged the co-operation of his company with truck

farmers in the marketing of their products to the best advantage. Last month the freight representatives of the Southern Railway held a meeting at Atlanta for the purpose of furthering a campaign for the planting of more fruit and vegetables for shipment. Instructions to that end have been issued by Mr. D. Cardwell, division freight agent at Columbia, and he has placed himself alongside of Commissioner Watson of the South Carolina Department of Agriculture in efforts to enlarge the trucking industry of the State.

This movement should have far-reaching, practical results. The growing of fruit and vegetables in the South for markets in the West and North represents already an annual income to the South of at least \$100,000,000. But the business is in its infancy. It can be developed immensely, and the co-operation between the railroads and growers like that suggested by the officials of the Southern Railway is a direct means to that expansion.

### FIGURES FOR PROGRESS.

A correspondent of the MANUFACTURERS' RECORD writes from a Southern State:

This State has a department of agriculture, but the Legislature failed to provide any money except to pay the Commissioner's salary; consequently all the work of the county tax assessors in compiling statistics about crops this year is lost because there is no clerical force in the Department of Agriculture to tabulate these statistics.

The correspondent holds it as a great disadvantage to the State to be without authentic statistics showing the extent of raw materials for the benefit of persons wishing to establish manufacturing enterprises there. We are not fully acquainted with the duties of the Commissioner of Agriculture of this particular State, but our correspondent's letter suggests to us the worse than worthlessness of establishing departments, bureaus or commissions under State or National governments with appropriations sufficient only to pay the salaries of the politicians or other dervents who frequently are placed in the offices thus created. We believe that the Commissioner of Agriculture in this particular case is one of the notable exceptions and that he has endeavored to make his office return value to the State. But in too many instances, both in State and nation, the incumbents of such offices designed to be a source of practical information are disqualified for doing anything but drawing their salaries and turning in some sort of an apology for an annual report, or are frequently, even with excellent resources at their command, occupied in using their offices for the promotion of party politics or personal fads.

Be that as it may, if crop statistics have been compiled in the county assessors' offices in the particular State, we are sure that there are daily newspapers in the State with enterprise enough, now that their attention has been directed to the matter, to tabulate

the statistics. They can do so as easily and as promptly as they can tabulate the figures of election returns, and to the far greater benefit of the State.

### IMMIGRATION.

Three years ago there emerged at Washington, by way of a bogus "Southern Industrial Parliament" that fooled some Southerners, a scheme engineered from the capital of a foreign country designed to hoodwink the South into unquestioning acceptance of a horde of aliens. Publicity compelled the promoters of the scheme, who had secured a species of co-operation from the National Government, to drop temporarily their "Southern Conference" method and to work under cover of an alleged philanthropic association in New York. The scheme comes to the surface now and then, but has been in the background since a division in a bureau of a Federal department has undertaken to manipulate the foreign element in this country, and has expressed in this campaign year a purpose to use the South as a means of relieving New York of a congestion of population that constantly menaces it. Bearing upon this purpose were the announcements in the early part of this year of the return to Europe of hundreds of thousands of immigrants, announcements calculated to make folks anxious about the labor supply of the country and, in their anxiety, to relax their vigilance as to the character of newcomers. On July 2 was published a statement from a source interested in immigration because of the passage money received by it from immigrants, that in the first six months of this year 677,884 steerage passengers had returned from the United States to their native lands. That was quite startling to the timid and unthinking and was widely commented on and used to promote the campaign of the distribution of immigrants under Government auspices. Like publicity, though, was not given to the fact made known in the last week of July that about 600,000 of the steerage passengers going back to their native land had bought round-trip tickets in preparation for return to New York. These facts should not be forgotten when an immigration official of a Southern State is reported as stating that Federal immigration officials at New York had told him that they would supply the planters in his State with all the men they needed if the planters would advance \$10 to pay for steerage passage from New York to the port nearest the planters for each man thus supplied.

Isn't it about time for the members of Congress from the Southern States to look into this plan of Federal distribution of immigrants and make it futile? Isn't it about time for the intelligence of the South to declare itself against the policy of being used as a cat's-paw for all sorts of schemes, social, educational and philanthropic, so-called?

In the matter of immigration, isn't it

time for resistance to schemes having the sanction of the Federal Government or promoted by influences alien to America to interfere, under the pretext of assisting, with the work of individual States or communities for an increase in their populations?

The right way to secure immigrants has been clearly pointed out. In Virginia, for instance, under the intelligent direction of Commissioner G. W. Koerner, 4000 farms have been purchased in the past two years by outside persons, representing an investment of \$25,000,000, and this has been done with refusal to accept from steamship companies and immigration agencies thousands of the idle and unemployed from foreign countries, whether they were still waiting to be helped to this country by their own governments or were already congested in New York city. And Commissioner Koerner is constantly receiving inquiries about Virginia lands from persons in the North and West and in Canada, and is still interested in inducing a movement to Virginia of thrifty Scotch, English and Scandinavian farmers. Like inquiries are being received by the Department of Agriculture of North Carolina. Commissioner Watson of the South Carolina Department of Agriculture has done an excellent work for his State in listing available farm lands for the benefit of would-be settlers. The practical value of such a policy ought to be recognized everywhere as has been done at Natchez, Miss., where the Chamber of Commerce is undertaking to list about 30,000 acres of farm lands nearby and to co-operate with Capt. J. F. Merry, General Immigration Agent of the Illinois Central Railroad, in inducing immigration. The German Immigration League of Texas is planning to encourage the settlement of German farmers in Texas, and the inauguration of a direct line of steamers between Gulf ports and Norway, planned for this fall, ought to be made the means of bringing about the steady flow of a stream of desirable immigrants to the South.

Success of such plans will make ridiculous the schemes to turn the South into a social dump for the benefit of other parts of the world.

### "CONFOUNDED EDUCATION."

October 12 is the date set for the beginning of the junket in New York and New England of the "Association of Southern States Superintendents" under the auspices of the Ogden Movement. In the absence of specific requirement in the State laws that superintendents of education shall take such a trip at a time when naturally they might be expected to be immersed in the details of administering their local educational systems, the why of the junket is in the probability that neither the States nor the superintendents will have to meet its expenses. What it will cost the States ultimately may hardly be calculated at this time. Channels of pub-

licity have doubtless been well oiled to assure the trip being given a significance in inverse ratio to its real value. It could be made of service, though, if from the participants in it could be had expressions of intelligent opinion about what the New York *Independent* has cleverly and correctly dubbed the "confounded education" of the country.

Figures are magnificent. Hon. Elmer Ellsworth Brown, United States Commissioner of Education, estimates that the "educational enrollment" of the country, that is, the folks going to some kind of school, takes in 18,881,163 persons, and that not far from a half billion dollars represents the annual "outlay for American education." Enrollment for what? Outlay for what?

For answer look at Alabama, regularly mentioned as typical of the wonderful effects for good of the 10 years' energizing by the Ogden Movement and certainly furnishing two or three personal beneficiaries of the Movement. Two years ago, according to the Birmingham *Age-Herald*, the State was supposed to contain 702,834 children of school age. This year the number is supposed to be 687,074, a falling off of nearly 16,000, and the *Age-Herald* thinks that another reduction of 16,000 would probably bring the reported number down to the bedrock of fact. It, or no one else, imagines that there are fewer children in Alabama now than two years ago, and it says that the new census is an indictment of the census of 1906 for padding, as:

The more names a county returned, the more money it received from the State, and the result was a great paper aggregate of school children.

Which leads the Man up a Tree to wonder what part of the aggregate of "educational statistics" about the South published broadcast by Ogdenites, salaried or volunteer, was merely paper, as they are largely novices in statistics and dependent upon "official" figures. And what sort of education was it that made possible a padding of the census for the purpose of obtaining educational money?

The Alabama case would probably be found not to be unique if the whole truth could be known about the methods of distributing school funds in the country generally. It is cited, though, as a striking commentary upon the frame of mind which emphasizes in discussions of "education" such items as money available for schools and the attendance of children upon the schools. But education is essentially a question of how the money is used and what is done with the children. Individuals in influential positions are coming at last to voice opinions in this particular, long held by others but usually howled down by the self-constituted educational hierarchy, dealing with the effects of "confounded education." For instance, a writer in *American Medicine*, discussing overwork for school children in the light of investigation made in Germany, from which this country has borrowed so much educational nonsense, says:

It is said that Professor Eulenberg has investigated over a thousand cases of suicide in children, and that he finds that more than half are due to overwork and failure to pass examinations.

Capt. W. Gordon McCabe, a distinguished and successful educator of Virginia and a brave man, expresses some truths as to another phase of the situation when he writes:

People who are ambitious for public office are all afraid to breathe a word of criticism against the public schools. There is not today in this State a political "leader" who would dare utter in public any criticism of them, no matter what their shortcomings.

This is the type of "leader" who is always bragging about "the increase in civilization and education" in what his kind calls "the New South," and who listen, as if one had inquired of an oracle of God, to the educational maunderings of the "Miss Nancies" of the *New York Evening Post*.

Then reverting to the noble old fitting schools that held gentility as of prime importance, Captain McCabe writes:

It will, indeed, be a sad day for the weal of this State when that type of private high school (preparatory to the University of Virginia, Yale, Harvard, West Point and Annapolis) is swept away by the shabby tide of "Progress" and along with it its perilsome lesson, in school and out of school, that a delicate sense of personal honor, absolute truthfulness and manly courage (physical and moral) are worth all the Latin, Greek and mathematics ever put within the lids of a book.

Captain McCabe writes from the standpoint of the private school, but from the center of the "common school" system has recently come a blast in the shape of an address by Commissioner of Education Andrew S. Draper of New York. He says:

When half of the men who are responsible for the business activities and who are guiding the political life of the country tell us that children from the elementary schools are not able to do definite things required in the world's real affairs, there is something the matter with the schools. When work seeks workers, and young men and women are indifferent to it or do not know how to do it, there is something the matter with the schools.

It is because I believe as ardently as I do in the open chance for every American child that I say that the implications and the influences of the schools must not lead boys who might become excellent cabinetmakers into being no-account lawyers, and girls who might be first-class breadmakers or dressmakers into being fourth-class music teachers.

Dr. Draper points out a number of causes of this distressing situation, among them too short terms in the elementary schools and too long vacations in the interest of teachers, too much pedagogy and too little teaching and the practices of "pedagogical and psychological wretches who seem to think that they can experiment upon children as physiologists and bacteriologists practice upon guinea pigs, and that without any equivalent basis of scientific knowledge." He declares that wrong is being done to millions of children, and that the lives of children are prodigally wasted.

God's truth, that. But what a red rag for pedemagogy, the curse of our educational system!

Statesmanship of education is as misdirected as politics of education. Dr. A. J. Dickinson of Alabama, protesting against the "rapid tendency to establish by law a State education, with its chain of schools, from the primary to the university," and manned by a pedagogical hierarchy, declares that "this tendency of the centralization and consolidation of our schools is far-reaching and radically dangerous to liberty of learning and diversity of mind," and says:

The hierarchy of political pedagogues have a task before them ere this scheme is enacted into law, and they may well pause ere they spring such an un-American innovation on a free and democratic people.

Something of the same spirit is manifest in the protest of the New York *Independent* against the absorption of the small college in the so-called university. In spite of the *Independent's* hopes to the contrary, this absorption will continue to the suffocation of American instincts if the co-operative programs financed through the \$43,000,000 educational trust of the General Education Board and the Carnegie eleemosynarisms are permitted to continue to ooze their fetid influences. One immediate effect is set forth by the Boston

*Herald*, which does not favor plans for standardizing Southern education, and which says:

There was a time when a college president was chosen for his learning or his piety. He had edited Greek tragedies or Roman histories; he had won attention by his discussion of German philosophy; he was as a shield against the darts of the infidel and his counter-thrusts were formidable. This species of college president is passing. He is almost extinct. His successor may be a man of broad and illuminating culture, but it is said that he must first of all be practical, a shrewd business man, a persuasive beggar for money.

The influence to mendicancy in these "educational philanthropies" is lost sight of in the discussion over the exclusion from participation in the Carnegie Professional Pension Fund of denominational colleges. The results are epitomized in the following from a denominational paper:

This pension fund has proven to be a severe temptation to some denominational schools. They have been fairly watering at the mouth as they thought of this large and luscious lump of gold. Some have given proof that they were sorry—so sorry—that they were denominational. Some are so very anxious to become pensioners on the bounty of the millionaire steel king that they are making frantic and pitiable attempts to adjust themselves to Mr. Carnegie's conditions. The denominational school that would trade its denominational birthright for a mess of Carnegie pottage dishonors itself and the denomination to which it belongs.

With ability to beg persuasively for money as the highest qualification for the presidency for "higher institutions of learning," with authorities of denominational colleges sacrificing to pauperizing "philanthropy" the principles that made the colleges possible, even though their founders and long supporters cannot protest from their graves, with a \$43,000,000 educational trust deliberately planning consolidation and centralization in a system of education for the country, and with the lower schools mangling the mentality and the morality of millions of children, there is demand for immediate and radical reform of the educational system and for an awakening of American conscience and common sense.

Neither, though, may be expected from the junket of the "Association of Southern States Superintendents." For that is, under the auspices of the Ogden Movement, bristling with the influences to educational pauperism and general demoralization.

#### MUTUAL INTERESTS OF MILLIONS IN RAILROADS.

In this demagogic day of appeals to class instincts and class interests, the fact of the intimate inter-relation of all men cannot be too strongly or too frequently emphasized. Intelligence will, therefore, welcome the contributions to public sanity in the recent address of B. F. Yoakum, chairman of the executive committees of the Rock Island-Frisco lines before the Brotherhood of Locomotive Firemen and Enginemen. Mr. Yoakum's thesis naturally turned upon the mutual interests of railroad ownership, railroad administration and railroad employment, for he is a practical railroad man, and is, moreover, a railroad constructor of notable achievement, having built several thousand miles of lines. He is a Southerner, and is especially well known from Missouri to Texas, where he was actively engaged in construction.

To his hearers Mr. Yoakum made it very plain that as a railroad officer he is just as much an employee of the companies which hire him as anyone of them may be and that their interests

in the welfare of the roads is mutual. He emphasized the necessity for securing just legislative treatment for railroad companies, and urged that all who heard him should reject the enticements of demagogues and their specious but impractical schemes, however charming they might appear to be. He cited facts and figures to show the truth that the railroads cannot recuperate from the effects of the panic and successfully take up the great work before them if they should again be subjected to a series of assaults which would render it impossible for them to secure funds for their purposes.

He pointed out that during the last 10 years there were built in the United States 44,000 miles of railroad, an increase of 24 per cent., and he estimated on this basis that within the next 10 years there should be built 55,000 more miles of lines. That this is hardly too optimistic an estimate is shown by statistics covering the last decade, when the increase was from 3000 to 7000 miles per year.

Mr. Yoakum's words on this point should be read in full. He said:

The railroad mileage of this country last year was 227,000 miles, which is an increase of 24 per cent. in 10 years, during which period there were constructed 44,000 miles. On this basis, within the next 10 years there should be 55,000 new miles of railroad built. In the past 10 years the gross earnings of the railroads have increased 130 per cent., and at this same ratio of increase the gross earnings in 10 years will be \$6,000,000,000. As the railway employees receive 42 cents of every dollar earned by the railroads, their payroll will have increased from \$3,000,000 per day, as it was last year, to \$7,000,000 per day, or annually to a total of \$2,500,000,000. The payroll of the firemen alone, which last year was \$53,000,000, will amount to \$122,000,000 at the end of the next 10 years if our country is permitted to develop as it should and as it has for the last 10 years, and the number of firemen will have increased from 70,000 to 160,000 men. Within the next 10 years our population at the present rate of increase will be more than 100,000,000 people. While these are remarkable figures, they are nevertheless true, and all loyal Americans must feel there is greater work of development yet to be accomplished in our great fertile and productive nation in the future than in the past, with only one-half of its area developed. With the increased business of the railroads I have shown for the next 10 years, one man out of every six of our entire adult population will be a railroad employee, or a total of 4,000,000 employees—a great magnificent army of men—and we should look forward to the protection of these properties on fair terms and not to Government ownership, which would be a mistake. We are a happy family, and want to continue our freedom of organization as railroad coworkers and not as uniformed Government servants reporting to inexperienced Federal authorities and superintendents at Washington.

To do the necessary railroad work of the next 10 years Mr. Yoakum estimated that \$6,000,000,000 would have to be spent, and he laid stress upon the fact that for all this work the money must come from the great money centers. In this connection he directed his hearers' attention to the evident fact that, notwithstanding allegations of crookedness of various kinds, there was beneath all the business of the country a solid foundation of honesty, and that the men who have charge of great enterprises are, as a rule, of sterling integrity. These are the men who secure the money from the investors for conducting such great works as railroad improvements and extensions. He added:

The investor hesitates to risk his money in a business which is being constantly attacked by our lawmakers. Continued agitation makes him afraid for the future. I want to make plain to you that the attacks on the business hit the employee harder than the man who invests in stocks or bonds, as the railroad employee gets 42 cents of each dollar earned, while the investor receives 21



cents. Keep these facts plainly in mind, and you will see that your interest and that of the investor are inseparably linked in a partnership, only you have twice as much at stake as the investor in the gross earnings of the railroads of this country. What can we hope to gain by our politicians continuing to stamp the bankers and capitalists as a body as unscrupulous in their business methods in dealing with our corporations and institutions?

Is it not to the interest of every railroad employee and every investor in railroad securities to ask the shapers of our political policy to go slow and consider well such a vital interest to such a large number of our citizens and general welfare of the country before enacting laws or restrictive legislation or authorizing commissions to reduce rates and regulate the operation of these properties to a point that will prevent the building of railroads when other people are willing to furnish the money?

Such an address as that of Mr. Yoakum merits perusal by every railroader in the country. He said, in concluding his remarks, that he had endeavored to talk as a fellow worker; that there would probably always be questions for settlement between the railroad companies and their employees, but that they should both stand together for protection of the loaf in which they are both interested, because if another 5 or 10 per cent. is taken off, the remaining 90 per cent. will not go around.

This closing phrase puts the condition of affairs in the railroad world so clearly that it can be comprehended by anyone, especially in view of the hard times which the companies are now experiencing and which they have felt keenly for at least the last eight or nine months.

#### THE SOUTH AS A PELICAN.

Not many years ago a Southern man was selected to be the architect of a modern cotton mill in a Massachusetts city. Another turn in the wheel brings the announcement that a native of North Carolina, Mr. William H. Harris, has been elected treasurer and agent of the Slater Cotton Mills at Pawtucket, R. I., one of the leading manufacturers of white goods in the country. Mr. Harris is a graduate of the Agricultural and Mechanical College at Raleigh, and at the age of 18 years quickly found his place with the D. A. Tompkins Company at Charlotte. Since then he has had wide experience in cotton manufacturing, including Southern representation of the Draper Company of Hopedale, Mass., and the success that he has had warrants the conviction that he will make a notable record in his new field. New England is to be congratulated upon having this accession to its working forces. But what of the South? How long is it to be a sort of fabled pelican in the wilderness, draining itself for the benefit of others? How long will it be before the South becomes so attractive for the technically-trained men that they will find it impossible to accept positions in other parts of the country? There is so much to be done in the South and such great opportunities there for the man who can do things that even now it cannot spare one man of vigor and ambition.

#### GOING FROM HOME FOR FOOD.

It is reported by the New Orleans *Times-Democrat* that Senor Jose E. Alvarado, Consul-General of Honduras in that city, expects arrangements to be completed within a short time by which the abattoirs of New Orleans will be supplied with cattle from Honduras. Senor Alvarado estimates that the slaughter-houses in New Orleans kill more than 100,000 first-class steers annually, and as Honduras ports are but

three days' distance from New Orleans, that between 40,000 and 50,000 head of cattle could be shipped to the latter city in the first year, the number to be increased as conditions might justify. If the plan should go through it would add an interesting feature to the commerce of the country, which ought to be able to raise all the cattle needed for food. But it is interesting to note that the plan would not be entirely a novelty. Though this country exported in the last fiscal year 349,210 head of cattle, valued at \$29,339,134, it imported 92,356 head, valued at \$1,507,310.

#### TUBERCLEHYSTERIA.

To the Man up a Tree about the most significant outcome of the long and widely-heralded International Tuberculosis Congress is the failure of the experts to agree about the transmissibility of the tubercle bacillus of the bovine type to humans. Not entirely disassociated from the question, perhaps, is the question of the value or the danger of the use of tuberculin for the mitigation of tuberculosis. With the dawning of the possibility of compulsory inoculation with tuberculin in treatment for tuberculosis the layman who thinks for himself may be inclined to inquire as to the extent to which compulsory vaccination has been responsible for the increase of tuberculosis and other horrible kindred diseases. At any rate, the disagreement of the world-doctors at Washington ought to check the hysteria among the uninformed about tuberculosis and other germ fads and theories, hysteria which makes congresses, etc., possible.

#### COTTON COMPETITION.

The reports issued at this time of the year of cotton growing under European auspices in competition with the South are beginning to travel through official channels, according to the custom for the opening of the American cotton season. The latest figures are of the results of cotton grown annually in the colonies and protectorates of Great Britain, not including India. These figures show an annual product of 11,523 bales, valued at \$1,053,848. Not much competition in that.

#### THE COTTON MOVEMENT.

According to the report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, the amount of cotton brought into sight for September was 1,218,689 bales, an increase over the same period last year of 377,999 bales. The exports were 559,558 bales, an increase of 184,435 bales. The takings were, by Northern spinners, 99,094 bales, an increase of 20,088 bales; by Southern spinners, 147,439 bales, a decrease of 49,989 bales.

Indicative of the widening interest in the question of the full utilization of materials for fuel is the publication by the Canadian department of mines of a volume on the manufacture and use of peat and lignite in Europe. There are about 37,000 square miles of peat bogs in Canada of an average depth of from 5 to 10 feet. It is estimated that Canada pays about \$20,000,000 a year for imported coal and that these importations would be largely curtailed by the manufacture of Canadian peat and lignite into briquettes.

The Atlanta Taxicab Co., capital \$12,000, has applied for a charter in Atlanta, the incorporators being L. P. Stephens, Thomas P. Hinman, R. F. Ingram and J. E. Levi.

A. W. Dunn of Spray, N. C., is reported to be organizing a company to operate an automobile line between Draper, Spray, Leakesville, Wentworth and Reidsville, N. C.

## Chattanooga: A Type of Southern Progress

[Editorial Correspondence Manufacturers' Record.]

Chattanooga, Tenn., October 5.

The meeting of the American Institute of Mining Engineers at Chattanooga has again illustrated the truth that every investigator who makes a personal study of the South and its wealth of resources goes home with a new conception of the future of this section. The members of the institute who are here might say: "We came, we saw and we were conquered not alone by the resources of this section, but by the genial hospitality of the people of Chattanooga." And Chattanooga was able to make a good start in this direction by having a splendid hotel which would do credit to any city in the land. The spirit which dominates this progressive place is shown in the fact that when the plan for the construction of a modern hotel was presented to a leading citizen, the first interview was not closed until he had agreed to provide \$800,000 for the undertaking. But the building might be perfect and yet the management be such as to repel rather than attract. Not so in this case. If any man wants to know how a hotel can be run to a degree of perfection rarely equaled and how its proprietor can know every guest and see that he learns everything to be learned about the town and the surrounding country, he ought to come to Chattanooga and study the workings of the Hotel Patten.

Here one finds an oasis in the dreary desert of bad hotels or badly-managed good hotel buildings. Chattanooga has set every city of the South outside of New Orleans, where hotel management is being developed into an art, an example, and blessed will be the time when the lesson shall have been well learned. The traveling public ought to raise a fund to send nine out of every ten hotel proprietors in the South to Chattanooga to spend a week in studying hotel management. For good hotels are not alone a comfort and a delight, but they are potent factors in the material progress of any community. Such a hotel as "The Patten" is worth to Chattanooga far more than a million dollars invested in any industrial enterprise could possibly be.

But turning from hotels as one of the South's greatest needs, and one which exerts a great influence for good or evil, it is interesting to hear the comments of the men who had never been South before. Many of the visitors have made side trips to neighboring points in Tennessee and Alabama, and the more they have seen the greater their enthusiasm. One distinguished geologist, who spent less than a day in Alabama at a point where even so brief an examination enabled him to gain a fair idea of that district to add to what he had already learned here, said he had seen enough to create amazement at the South's ironmaking potentialities. He only voiced what many others are saying. The value of such a meeting in bringing

the metallurgists and geologists of the country, upon whose judgment capitalists rely in making their investments, to a personal acquaintanceship with the South cannot be measured. Others have talked about seeing Chattanooga years ago, when it was a village without paved streets or sidewalks, and their astonishment at finding it now a cosmopolitan city of splendid homes, of fine business houses, with an industrial development which for diversity can scarcely be equaled in the country.

Standing on Lookout Mountain one gazes on a panorama of surpassing beauty. It would well repay a trip of a thousand miles simply to study the marvelous beauty and sublimity of this view.

It might well be said of this scene, as the late Judge Kelley once wrote of Western Carolina: "It is the most glorious land upon which my eyes have ever rested." But as one looks down upon the busy city, with its hundreds of smokestacks, as he sees its foundries and machine shops, its furnace plant, its varied woodworking factories and its mills of many kinds, he cannot help, even amid such awe-inspiring views, thinking of the time when the great valley below him will be peopled with hundreds of thousands of men and women drawn here by the all-compelling magnet of progress and prosperity. He sees the railway lines threading their way through the mountain gaps and meeting at Chattanooga; he hears the story of how Cincinnati poured out not millions, but tens of millions, to build a line to this place in order to reach the gateway to one of the most richly endowed regions of earth; he looks down upon the winding river, with its vast potentialities for transportation, for an ample water supply for millions of people, and for great electric power development.

Even now one of the most important hydro-electric developments undertaken in the whole country is under construction, supervised by the United States Army Engineers in order to couple power development with river transportation improvement, which within a year or two will afford over 50,000 horse-power of electric energy for use in Chattanooga. And as the visitor gazes out from Lookout Mountain upon this scene and remembers the mighty struggle where contending armies fought the battle above the clouds, and where tens of thousands died to prove their faith in the causes which they had espoused, he rejoices that here in this valley and around this battlefield the people of the North and the South, the East and the West, are uniting in the utilization of Nature's rich treasures for the blessing of mankind and the building of a city where the best of every section is destined to find scope for its activities, and where commerce and industry, education and religion, shall supplant the bitterness and the death struggle of nearly half a century ago.

R. H. E.

## ETHICS OF THE ENGINEERING PROFESSION.\*

By JOHN HAYS HAMMOND, LL.D.

This is an era of "expansion," and, conformably with the change in commercial conditions, the function of the mining engineer, as well as that of his confreres in many other professions, has also expanded. From his capacity of an engineer, limited to the determination of technical questions, the engineer of today has come to assume an economic importance

in those branches of industry dependent upon engineering skill for their development.

He is indeed an engineer of limited usefulness who does not go further professionally than to submit a purely technical report on subjects presented for his consideration. While he has the same responsibility as formerly in the solution of the technical problems involved, he is further expected to supplement his report with advice on the financial and commercial

\*Presidential address at the Chattanooga meeting of the American Institute of Mining Engineers.

cial aspects of these problems. For the great majority of problems presented to the engineer ultimately involve the determination of the pecuniary relations of the propositions under consideration.

The great corporation lawyer no longer earns his fee by merely submitting his opinion as to the legal issues involved in lawsuits affecting the corporation; he now assumes charge of the entire legal work, including both the organization of the corporation and the maintenance of its legal status thereafter. In like manner the engineer, whose report was, as I have said, formerly confined to the determination of the geological and other cognate features of a mining enterprise, is now expected not only to embody information on these subjects in his report, but also to give his opinion whether the property offered for sale in pursuance of such an enterprise is worth the price asked for it.

Moreover, if he recommends the purchase of a property he incurs a certain moral responsibility for its efficient management, inasmuch as his professional reputation depends upon the realization of his predictions as to the outcome of the investment. For this reason the engineer passes from the role of an expert to that of a consulting engineer, bound to supervise both the technical and the business management of the property purchased by his clients.

With this additional responsibility, and the consequent increase of professional opportunity, comes an extension of the field covered by the ethics of the mining engineer. Our professional duty may be regarded from three points of view: First, the relation of our work to our employers; second, its relation to the investing public, and third, its relation to our individual interests.

#### Relations to Employers.

The question has been often discussed among engineers whether it is professionally proper to make a report for the seller of a mining property. Such practice has been sometimes condemned, but a little reflection will show that the condemnation is not warranted. For it is neither wrong nor unreasonable that the owner of a mineral property should desire to present such a statement of its nature and probable value as will secure the attention of possible purchasers, or that he should secure for such a purpose the assistance of one who knows how to make such a statement intelligently and in scientific language, i. e., the language which will convey a definite meaning to those who know it, or that he should pay such an assistant for his skill and labor. It goes without saying that no expert in such a case, or in any other case, may suppress or misstate facts or disguise or withhold his honest opinion in a statement to which he lends his name. Yet, this being understood, it still remains true that a "vendor's report" is not advice to anybody to buy at a stated price, but only a description of the property (usually without any mention of the price at which it would be to the purchaser a profitable bargain). There is nothing dishonorable or unprofessional in honestly making for the owner of the property such a description. But there is often danger that it may be afterwards used as if it were advice offered to a purchaser. In any such report, therefore, the fact that it was made for the owner or vendor, or his representatives, should be clearly stated beyond all misunderstanding, for the protection of both the author and the reader. This precaution being observed, I see no valid objection to the writing of such a report by a mining engineer.

Nevertheless, it is an undesirable kind of work, particularly for young mining engineers, whose reputation for integrity

and judgment, not yet established by long practice, may be, justly or unjustly, placed in jeopardy by any such expression of their opinions, and may be destroyed in public esteem by the failure of any mining scheme with which their names may have been thus associated. In their own interest they should accept such engagements with caution and protect themselves with vigilance against illegitimate or misleading use of their statements. In short, they take in such cases a risk which older engineers, backed by a reputation already established, could better afford to take. As between the two classes, the question is one not so much of ethics as of practical wisdom; yet we may fairly say that the avoidance of folly is in no small degree an ethical matter. It is worthy of notice that the wise proverbs and warnings of the Good Old Book often make no great distinction between "fools" and "sinners."

In this connection arises the question of the acceptance of contingent fees. It seems to me that an expert of established and unimpeachable reputation is perfectly justified in recommending the purchase of a property and accepting compensation from the promoters, provided, first and without qualification, that full publicity be given to the nature of his connection with the enterprise; and secondly, that his compensation be contingent, not upon the successful sale of the property, but upon the subsequent success of the undertaking. In other words, an expert who makes a favorable report upon a mining property, for which he is to receive payment in money if the property be sold on his report, must needs have an unparalleled reputation for integrity to endure that revelation of this situation which he cannot without dishonor withhold. But one who frankly avows that he is to be paid in the stock of the projected company, and therefore, as an investor of time, skill and labor, is on the same footing as the investors of money, occupies a much less vulnerable position. In either case, and in any case, there is no safety—and, I may almost add, no honor—outside of the frank and full publication of all such circumstances as might be afterwards called in question, criticized or condemned. This is the expert's Golden Rule: "Tell unto others, now, whatsoever you would not have them tell on you (with unjust misunderstanding and scandalous comment) hereafter!"

Another question involved in the relations of a mining engineer to his employer concerns the acceptance of commissions from the sellers of machinery, supplies, etc., the purchase of which he has made as agent or recommended as adviser. In many instances of similar nature affecting other professions this practice seems to be established and condoned, if not avowedly justified. It is even defended by ingenious sophistry, somewhat as follows: The manufacturers of certain articles are bound by trade agreements not to sell them below a certain price, or, in the absence of such agreements, do not dare to "cut" the price, for fear of thereby invoking savage reprisals from their competitors. But this minimum price includes the salary or commission paid to a regular selling agent. If, therefore, the agent of a customer makes a purchase direct, without the intervention of their sales agent, they are willing to pay him "the regular commission," though they are not willing to reduce by the same amount their bill to his employer. The argument is plausible from the manufacturer's standpoint, and, indeed, it is hard to judge him justly. For if, in a given case, in order to gain a customer he undersells his competitors, he may be committing the heinous modern sin of granting a "rebate," whereas if he refuses to do this he may be guilty of

partnership in a wicked "trust" or "combine." The popular sentiment and legislative furor which condemns at the same time free competition in prices and every agreement to prevent such competition needs, as President Roosevelt has, in substance, frankly declared, to be modified by common sense.

But we are not now concerned with the ethical or legal problems of the manufacturer. From the standpoint of the engineer, acting as a purchasing agent or adviser, the case seems to me as clear in the court of honor as it would be in a court of law. He cannot honorably accept a commission from the seller while he is the agent of the buyer. If the custom of the trade permits the giving of such a commission, but not its deduction from the face of the bill rendered, he may, of course, honorably accept it and pay it over to his own employer—that being the only way in which he could secure the minimum net price in his employer's interest. But even in that event he should place his honor beyond suspicion—as, for instance, by demanding the commission in a check to his own order and endorsing the same check to the order of his employer. There may be exceptional cases in which the taking and keeping of a commission is justifiable, but one thing is clear beyond dispute: It is always wrong when it needs to be kept silent.

It seems almost superfluous to insist upon the duty of maintaining a spirit of loyalty toward employers. Yet this spirit is by no means as prevalent as a sense of honor, or even of enlightened self-interest, would demand. Loyalty to a corporation should be as unquestionable as to an individual. In neither case should it be sacrificed to feelings of personal resentment or disapproval. If one cannot "stand for" the policies or practices of one's employer, the straightforward course is to seek employment elsewhere.

There are two special spheres in which the mining engineer, like the members of other technical professions, maintains a double relation:

One of these is that in which, being himself an employe, he exercises the employer's authority over other employes. In such a position, while it is his duty to protect vigilantly his employer's rights and interests, he should realize that he cannot do this more effectively than by invariable justice, good nature, respect and sympathy toward his own subordinates. Nothing contributes more to the success of an enterprise than the mutual exercise of these feelings between workmen and superintendents or managers. It is "team work" that wins in industrial undertakings, as well as on the athletic field. And in these days especially it is the cultivation of an esprit de corps, based upon truly friendly personal relations, which offers the best protection against the scheme of mischief-makers and demagogues.

The other double relation to which I have alluded is that which is occupied by an expert witness in a court of law. In this case he is theoretically amicus curiae, a friend of the court, giving under oath his assistance in the recognition and interpretation of the facts of the case, and for this reason he is permitted to do what no ordinary witness can do, namely, to give opinions as well as personally observed facts, and to support these opinions by hearsay evidence or scientific authority and argument, not otherwise admissible as testimony. Yet, on the other hand, he is retained and paid by one of the litigant parties, and he would not appear in court at all were it not reasonably certain beforehand that his testimony would support the theory and benefit the cause of his clients.

The ethics of this situation may be more clearly perceived if we consider that, first and foremost, the expert witness must remember the obligation of his oath. He has not the same latitude as the attorney, whose official duty is to present a client's case, without declaring his private opinion about it. Consequently, the expert witness should be thoroughly convinced beforehand of the justice and truth of the cause or the theory in support of which he appears. Such a conviction ought to be based upon a careful and exhaustive previous examination of the case, and no expert should agree to testify in any case until such an examination has established his opinion and qualified him to defend.

Concerning some other aspects of this question, I would here refer without further discussion in this place to the suggestive address of Dr. Raymond, printed in the Proceedings of the American Institute of Electrical Engineers for November, 1906.

#### Relations to the Public.

A more simple and congenial, yet more heavily responsible, relation is that which the mining engineer may be called to assume toward the public as the responsible endorser of a proposed undertaking. In consideration of the confidence which he invokes and expects, notwithstanding the fact that he has been paid by interested parties, he assumes a sacred trust, obligating him to safeguard the interests of a wider and more important clientele. The investor has not the time and perhaps not the technical knowledge required for the thorough study of a prospectus. He risks his money upon his belief in the ability and integrity of the engineer, who is therefore bound in prudence and in honor to be specially careful that his endorsement be clear and precise, without mental reservation or opportunity for misunderstanding. This caution applies particularly to what are called "gilt-edge" investments; that is, to enterprises so promising and so thoroughly investigated beforehand as to warrant their recommendation, on the terms stated, to the general public—that is, to unknown and probably unskilled clients. There are numerous instances in which the engineer has to give advice on speculative though honest and legitimate undertakings, such as the development of mining prospects, which should be confined to those who are willing and can afford to take greater risks in the hope of larger profits than pertain to the "gilt-edge" class of mining investments.

#### Relations to Personal Interest.

In connection with the class of advisory reports last named, it is good policy for the expert adviser to seek to acquire a special clientele among mining investors who will not be led to judge him by the results of a single case, but, knowing the wisdom and the successful outcome of his recommendations in other cases, will not condemn him when he turns out to have been mistaken. For such a disappointment sooner or later is inevitable, since no engineer, however able and careful, is infallible.

In my opinion, a mining engineer engaged in such a consulting practice should aim to become himself a capitalist and a purchaser and developer of mining properties. Should he acquire business experience he might become avowedly a promoter in a high and worthy sense of that term, and thus assist in driving out the unscrupulous promoters who are really parasites. According to my observation, the swindling in mining enterprises is done mostly by laymen, and not by responsible professional engineers or practical miners. The practical miner, indeed, is in many instances himself the victim of the unscrupulous promoter.



As already observed in considering the relations of the engineer to the public, it may also be repeated from the standpoint of his own interest that he should use the greatest circumspection to prevent the use of his name in support of enterprises of which he has but a superficial knowledge. He may be quite willing to "take the chances" and invest some of his own money in a scheme which he would not be willing to take the responsibility of recommending to another party dependent upon his judgment as a guide. But even such a private investment of his own money should often be avoided, lest his connection with the scheme as a simple stockholder should be construed as implying his deliberate endorsement of it as an expert.

It often happens that an expert who has won deserved reputation and public confidence is called to give advice concerning a district with which he is not personally acquainted. In such a case his honest offhand judgment, based upon general knowledge and upon experience elsewhere, might mislead both himself and others. Yet it is practically impossible

for an expert, visiting a given property or district for the first time, and, of course, known to all as the possible "advance agent" of capital, to get at the unfavorable conditions which it is everybody's interest to hide. I would earnestly recommend in such cases the engagement by the examining expert, at his own selection and cost, and without notice to any other party, of a local expert assistant, familiar with the conditions and history of the property concerned and of the district in which it lies; in other words, with those facts which a visitor cannot easily discover.

I am fully aware that these desultory remarks have covered but a small part of the field of professional ethics, even in a single branch of the professions represented by the institute. But I am not offering a code, or even an official and representative declaration of principles. My remarks are intended, and will, I hope, be accepted simply as a contribution to that discussion of their theme in which every engineer of experience may participate.

## Mining Engineers at Their Chattanooga Meeting.

By DR. JOHN SHARSHALL GRASY, Adjunct Professor of Economic Geology, University of Virginia, and Assistant State Geologist of Virginia.

[Written for the Manufacturers' Record.]

The American Institute of Mining Engineers, which was organized in 1871, and has since become one of the leading scientific organizations of the world, met on October 1 at Chattanooga. Of the 93 meetings which have been held during the 37 years of its existence, this is the eighth that has been held in the South. Only four of these conventions, however, were ever called to order at points in the South which might justly be called centers of metallurgy and mining. These two places happened to be Birmingham and Chattanooga. Excepting the meeting at Chattanooga, the last one to be held at either of these two cities was at Birmingham in 1888—20 years ago.

The Birmingham of that day was hardly more than a mining camp, with a population scarcely greater than that of a good-sized village. So marvelous has been its growth during this period of a fifth of a century that today Birmingham is second only to Pittsburg, with all that the latter stands for as a great center of industrial activity. As a center of mining and metallurgy many competent judges predict for Birmingham a future surpassing even that of Pittsburg. The furnaces at Pittsburg assemble the raw materials, in consequence of the necessity of hauling the limestone, ore and coke many hundreds of miles, at a much greater expense than is necessary at the rival iron and steel-making center of the South. The great advantage of manufacturing iron and steel in this Southern district, of which, as has been indicated, Birmingham is the principal center, consists in the existence of an exceptionally close proximity of raw materials, and this makes possible the manufacture much more cheaply of iron there not only than anywhere else in the United States, but more cheaply than anywhere else in the world.

It was the purpose of the members of the American Institute of Mining Engineers to gather in Birmingham and hold this ninety-third meeting there, but the strikes and the resulting labor troubles that occurred just previous to the time set for the meeting necessitated, it was thought, a convention at some other point, and accordingly Chattanooga was chosen as the next best place. Nevertheless, so anxious are these engineers, geologists and metallurgists, chemists, and all members, in fact, of this organization, to see the coal

and iron mines, to study the methods of mining employed in this important Southern center, the Birmingham district, and observe the furnaces and steel mills and all features of mining and metallurgy as practiced in the Birmingham district, that the trip and meeting at Birmingham has not been abandoned, but has been only postponed until a convenient time when the industrial interests of Birmingham shall issue another invitation. Then the members of the American Institute of Mining Engineers will carry out the original intention and meet in Birmingham, and will thus be given opportunity to see the district to the best advantage and under the best of auspices.

There is no doubt that such an invitation will be forthcoming at the proper time. The opportunity to show the Birmingham district, with its typical Clinton ores, its brown hematites and the less known but equally interesting and important Cambrian gray and red ores of the eastern portion of the State, the proximity to these of coal and fluxing materials, the metallurgical processes employed and methods of mining in vogue, to the leading engineers of the world has too many obvious advantages for it to be feared for a moment that they will be lost sight of, and consequently it is not improbable that the next meeting of the American Institute of Mining Engineers will be in the South, and furthermore, that members of this organization will at that meeting convene at Birmingham.

The principal papers of the Chattanooga meeting were prepared with the expectation that they would be read at Birmingham, where they would be of especial local interest, and then later published in the Transactions of the Institute. Two of these papers are of such great and timely interest, inasmuch as they describe the geological occurrence, etc., of the iron and coal of the district, two of the three raw materials that give the Birmingham district its great importance as a center for the manufacture of iron and steel, and are of value and interest for the reason that they demonstrate beyond question the almost illimitable possibilities that exist there for iron and steel manufacture in the future, that abstracts of the two are given here for the benefit of those not having access to the publications of the American Institute of Mining Engineers.

The first of these papers to be considered is by Ernest F. Burchard of Washington, who is a member of the United States Geological Survey. He has made a most careful study of the Southern "fossil" ores, and his paper is entitled "Clinton Iron Ore in Alabama." The following table gives in descending order the succession of the formations involved in the geology and discussed by Dr. Burchard. These rocks are exposed in and along the borders of the Alabama valleys, whose structure in general may be described by the one word anticlinal:

Table I.—Section of Pre-Pennsylvanian Paleozoic Rocks in Valley Regions of Alabama.

System.	Formation and character.	Thickness, Feet.
Carboniferous (Mississippian).....	Shale and sandstone.....	300 to 250
	Limestone and shale.....	300 to 400
	Sandstone and shale.....	50 to 200
	Fort Payne chert and limestone.....	100 to 300
Devonian.....	Chattanooga shale.....	0 to 30
"Silurian".....	Clinton (Rockwood) shale, sandstone and iron ore.....	200 to 700
Ordovician.....	Chickamauga ("Trenton") limestone.....	300 to 800
	dolomite and chert.....	250 to 2700
Cambro-Ordovician.....	basal dolomite.....	500 to 600
Cambrian.....	Conasauga shale and limestone.....	*1000 to 1500

\*Base not exposed.

"A. Clinton Formation.—The Clinton formation, in which the red ores occur, will be described somewhat fully here, owing to its particular interest in this connection. It consists in Alabama principally of sandstone, shale and beds of hematite. The beds of hematite, where unweathered, are calcareous, ranging from a calcareous, richly ferruginous sandstone to a ferruginous, siliceous limestone. Beds of impure limestone are present in Northeast Alabama, and in Georgia and Tennessee, but there appear to be no true limestone strata in the formation in the Birmingham district. The distinguishing feature of the formation is the relatively large quantity of iron oxide disseminated throughout all the sediments, either in the ferric or the ferrous state. While there are sharp lines of demarcation between certain beds of iron ore, shale and sandstone, many of these beds change from one to the other by gentle gradations.

"In Alabama the formation is thickest toward the northeast, measuring there more than 700 feet, and at this end of the area the proportion of shale is greatest. With thinning of the formation toward the south and southwest, where it becomes generally less than 300 feet thick, and locally thins to less than 200 feet, the proportion of sandstone increases. It is difficult, however, to apply one set of rules to all the areas of the Clinton strata in Alabama, particularly to strips of the formations that lie on opposite sides of a valley and are separated by structures that are in the main anticlinal. At Birmingham, for instance, Red mountain and West Red mountain lie nearly parallel to each other, generally only six or seven miles apart, yet there are greater differences in the character of the Clinton formation at corresponding points in these ridges than there are between points on the same ridge separated by two to three times that distance."

Dr. Burchard presents sections which give the Clinton formation a thickness ranging from 200 to 358 feet. Within this formation he finds four distinct ore horizons, only three of which, however, are of very great importance. All four ore beds differ more or less in thickness and iron content, and in the order of descending succession are as follows:

1. The Hickory Nut seam.
2. The Ida seam.
3. The Big seam.
4. The Irondale.

They gradually change in content of iron and in thickness along the strike or outcrop, and in this direction the hard ore, after the soft ore has been removed, varies more in chemical composition than, broadly speaking, is usually found to be the case when the ore bed is followed down the dip. The three principal ore seams are those below the Hickory seam, namely, the

Ida, the Big seam and the Irondale. The Big seam is thicker than either the Irondale or the Ida, but it is more siliceous and contains on the whole a less per cent. of iron. This thick, and often extremely sandy, seam sometimes contains as much or more than 10 feet of minable ore, while in the typical sections, the Ida and Irondale, the range is from about two and one-half to five feet—sometimes more—and vary at different exposures both in chemical composition, thickness and in nature and number of partings. The following section, presented by Dr. Burchard, gives

the stratigraphic position of the beds, and also, in feet and inches, the vertical distance between the four ore beds already mentioned above:

Section of Clinton Formation as Shown by Core from Diamond Drill at Bloss No. 1 Mine, on Red Mountain, Near Bessemer, Ft. In.

Chert, solidly stratified (Fort Payne).....	5 8
Sandstone, red, with coarse grit.....	5 8
Grit, coarse, soft, with gray sandstone.....	6 7
Limestone, gray, hard, cherty.....	31 ..
Limestone (?) ferruginous.....	2 7
Sandstone, ferruginous.....	23 6
Sandstone, gray, extremely hard in places.....	40 7
Grit, very hard, fine, with reddish sandstone.....	20 2
Iron ore, limy ("Hickory Nut") seam.....	2 7
Sandstone, gray.....	11 ..
Limestone (?) "marbled".....	15 ..
Sandstone, gray, hard.....	1 11
Limestone, ferruginous ("Ida seam") (?)	1 8
Sandstone, ferruginous.....	22 ..
Iron ore ("Big Sandstone, gray, shale, ferruginous, ft. minable. Ore, limy.....")	14 1
Sandstone, highly ferruginous ("Irondale") seam.....	2 5
Sandstone, mottled, highly ferruginous and fossiliferous ("Irondale") seam.....	4 8
Calcareous rock, gray, with sandstone and shale interstratified.....	1 3
Bottom of formation probably within 35 ft.....	246 4
Probable total thickness of Clinton strata.....	35 ..
	281 4

The analyses that follow are quoted from Dr. Burchard's paper to show, among other things, about what quality of hard ore an operator might expect to find in the mine slope below the level of soft ore. The soft ores are given under analyses 2 and 4, and the hard ore, from which the samples 2 and 4 were derived, as the result of leaching, is given under 1 and 3:

Table II.—Analyses of Clinton Iron Ores, Showing Gradation from Hard to Soft Ore.

	1.	2.	3.	4.
	P. C.	P. C.	P. C.	P. C.
Iron, metallic (Fe).....	37.60	45.70	59.44	54.70
Silica (SiO <sub>2</sub> ).....	7.14	12.76	12.10	13.70
Alumina (Al <sub>2</sub> O <sub>3</sub> ).....	3.81	4.71	6.03	5.65
Lime (CaO).....	19.39	8.70	4.65	0.51
Manganese (Mn).....	0.23	0.19	0.21	0.23
Sulphur (S).....	0.08	0.08	0.07	0.08
Phosphorus (P).....	0.30	0.49	0.46	0.10

Further on in his paper read at the Chattanooga meeting Dr. Burchard continues and says:

"Red ore occurs in practically all the outcrop areas of the Clinton formation, but only in Red mountain has it been found of sufficient thickness and purity to be worked on an important scale. The availability of the ore depends largely on the attitude of the inclosing strata. The beds of Red mountain dip southeast at moderate angles, 10 to 30 degrees, which are in the main fairly constant for a mile or more along the strike, and for a quarter to half a mile down the dip. Locally, there are abrupt 'rolls' or changes in the dip, due to minor folds parallel to the main axis, and in some places the ore has been so faulted that efforts to find it or to exploit it further have been suspended.

"The questions of greatest importance to

the district are (1) whether the present quality of the ore will be maintained to great depth; (2) whether the present workable thickness will continue to whatever depth it may be possible to mine the ore, and (3) whether the structure of the rocks underlying Shades valley—below which the ore beds normally lie—will be favorable for mining the ore. Certain facts have been brought out during recent surveys which have a bearing on these questions."

Dr. Burchard, like other field geologists who have been engaged in work for any length of time on Clinton ores, believes that the first two of the above three questions are correctly answered in the affirmative. The ore beds in a number of cases have been found to increase 1 per cent. in metallic iron for every 1000 feet down the dip. This is contrary to the old opinion, which was that the ore beds, instead of increasing down the dip, on the contrary in the hard ore increased in lime, with a decrease in per cent. of iron. With regard to Shades valley he says:

"In planning future operations beneath Shades valley, the importance of taking into consideration the certainty of some structural irregularities and the possibility of other and perhaps greater ones, and their effect upon the expense of ore mining, will be apparent from the foregoing statements. Careful prospecting with a core drill is probably the only method that can be relied upon to yield much definite information as to the ore reserves below this valley."

Dr. Burchard estimates that the total tonnage of ore in the main portion of the Birmingham district amounts to 394,342,800 tons, all of which, with the exception of 26,253,400 tons that is credited to the Irondale seam, occurs in the upper or minable bench of the "Big" seam. The sum of 394,342,800 tons is the grand total before deducting the production previous to 1906. When 43,193,300 tons, the production from 1880 to 1906, inclusive, is subtracted from the grand total above, the available ore left in the main portion of the Birmingham district is, according to Burchard, and his estimate appears conservative, 351,149,500 tons.

From the present writer's knowledge of the district only 20,000,000 to 25,000,000 tons of this 351,149,500 tons will grade over 34 to 40 per cent. in metallic iron. However, as is well known, the Birmingham district is not noted for its high-grade ore, but rather for the character of the ore and the proximity of the other raw materials necessary in the manufacture of iron.

Dr. Burchard estimates that the total available tonnage of Clinton ore in Alabama is "fairly well toward 500,000,000 long tons of ore." To this may be added over 100,000,000 tons of Cambrian gray and red ores of East Alabama, making a final grand total of 600,000,000 tons of available ore in the form of sedimentary deposits. All of this ore, in the writer's opinion, was formed as the result of original deposition, which is the genesis also assigned by Dr. Burchard to the Clinton ores—a conclusion reached after very careful detailed work, observation and study in the field.

Immediately preceding the paper read by Dr. Burchard was one of equal interest and value by Charles Butts, also of the United States Geological Survey, on the subject of Alabama coals. The interest in each of these papers was largely augmented by the contents of the other.

The Alabama coals occur in the Pennsylvania or upper division of the carboniferous, while the Mississippian or lower carboniferous rocks underlying the coal measures are divided into the formations named in table III. In this table are

given the divisions of the lower carboniferous of Alabama in their normal sequence with the Chattanooga shale of a Devonian age below and the Pottsville group of rocks above. The table is compiled from data contained in the paper by Dr. Butts, previously mentioned:

Table III.—Section of Carboniferous and Devonian Rocks of Alabama.

System.	Formation and Character.	Thickness Feet.
Upper Carboniferous or Pennsylvanian.....	Pottsville Group This group is to be subdivided into two or more district formations. It contains shales, coal beds and sandstones, coarse, fine grained and conglomeratic, massive and thin bedded.....	1100-1700
	Unconformity.....	30-100
	Pennington Shale—A gray shale.....	30-100
Lower Carboniferous or Mississippian.....	Bangor Limestone—Composed of thick beds of light to dark gray limestone; sometimes cherty and very shaly.....	300-400
	Hartselle Sandstone—Fine grained and hard to coarse grained and friable.....	100-200
	Fort Payne Chert—Modestly chert, some limestone beds and shale. Highly fossiliferous.....	300-500
Devonian.....	Chattanooga Shale—Fissile block shale.....	0-30

The productive portion of the carboniferous of the above table is confined to the Pennsylvanian or upper division of the coal measures. The rocks comprising this section of the carboniferous occupy broad troughs, synclines or basins in which they have been preserved from erosion. On the other hand, they have been entirely removed in those areas where the flexure occurred in the form of an arch or anticline. Dr. Butts divides for geographical reasons, as well as because of other structural relations, the several areas in which coal occurs into the following fields and basins:

1. The Plateau field.
2. The Warrior field.
3. The Coosa basin.
4. The Cahaba basin.

These last three of the four areas derive their name from the respective rivers that drain them.

"The Plateau field includes Blount, Lookout and Sand or Raccoon mountains. The coal resources are not well known, but are comparatively small. There are believed to be from four to six seams that are locally workable. This field embraces parts of Blount, Etowah, De Kalb, Cherokee, Marshall and Jackson counties, and is upward of 3200 square miles in extent. The estimated tonnage is 3,686,400,000."

"The Warrior field is separated from the Cahaba basin and Blount mountain by Jones and Murphrees valleys. It includes all of Walker, most of Jefferson, Tuscaloosa and Fayette counties, and smaller parts of Blount, Cullman, Winston and Marion counties. Its known area is estimated at 4000 square miles. Around its western and southern margin, however, its higher rocks and coal seams pass under rocks of much later age, and have probably a considerable and possibly a great extent to the southwest of their visible margin. This field has been the scene of the greatest mining activity and production in the State. Something over one-third of the total production of this district comes from the Pratt seam, and one-fourth comes from the Mary Lee seam. Eight to ten other seams furnish the remainder of the production. The estimated tonnage is 59,826,968,000."

The Coosa basin is a deep syncline forming the southeast margin of the Alabama coal fields and extending across Shelby and St. Clair counties. It is 60 miles long by 6 miles wide, and contains 260 square miles. This basin has not "been thoroughly explored, and the number and extent of its coal beds are not well known, but in different parts 2 to 12 seams are reported having a thickness of three feet or more." At Coalville the present writer examined a seam over 16 feet thick, containing a high per cent. of ash and sulphur and carrying the mineral Evansite. From its exposure at this locality this very thick seam is called the Coalville seam. "The total workable coal is estimated at 2,396,160,000 tons."

"The Cahaba basin is also a syncline west of the Coosa basin, to which it is par-

allel and from which it is separated by a faulted anticlinal valley. It includes parts of St. Clair, Jefferson, Shelby and Bibb counties. Its length is 68 miles, its average width about six miles, and its area 325 square miles. There are many workable seams, and the total quantity of coal in

the basin is large, the estimated tonnage being 2,994,200,000."

The foregoing facts as to the area and tonnage of the Alabama coal fields are summarized for the sake of convenient reference in the table below:

Table IV.—Names, Areas and Tonnages of the Four Alabama Coal Fields and Basins.

Coal field.	Area in square miles.	Tonnage.
Plateau field.....	3200	3,686,400,000
Warrior field.....	4000	59,826,968,000
Coosa basin.....	260	2,396,160,000
Cahaba basin.....	325	2,994,200,000
Total.....	7785	68,893,728,000

Practically all the coals of Alabama may be burned into coke, but obviously certain of the coal seams yield a coal more suitable for making coke than others. In the Warrior field, where the leading coal operations of the State are located, and where nearly all the coke is made, the Mary Lee, the Pratt and Brookwood group of seams are the coal seams that are most worked. The thickness of these coal beds is given by Butts as follows:

Average of 24 measurements of the Mary Lee bed, 4 feet 10 inches of coal.

Average of 31 measurements of the Pratt bed, 3 feet 6 inches of coal.

Average of 9 measurements of the Brookwood bed, 3 feet of coal.

Dr. Butts estimates the following tonnage for each of the above beds or groups named above:

	Short tons.
Mary Lee group.....	3,267,168,000
Pratt bed.....	827,360,000
Brookwood group.....	160,800,000
Total.....	4,195,328,000

In discussing the above figures Dr. Butts says:

"Assuming that 80 per cent. of the total coal in the ground will be mined, the yield would be 3,356,262,400 short tons. Assuming further that the coal will yield 60 per cent. of coke, the total amount of coke that could be made would be 2,019,757,240 short tons. On the basis of 1.8 tons of coke to a ton of pig iron, which is derived from a statement of furnace operations of a single company for April, 1906, this quantity of coke would produce 1,122,087,355 short tons of pig-iron. To produce this amount of iron at the present rate of production would take 625 years, but if the production should be doubled every 20 years it would take only 87 years."

From the statements made in the paper by Dr. Butts, taken in connection with the facts brought out by Dr. Burchard, some very interesting deductions may be drawn. One of the first that will occur to the reader probably will be that the ore supply of Alabama, while enormous, is nevertheless not nearly so abundant as the coal, and that there exists sufficient coal in Alabama to flux many times over the total tonnage of ore, though it were twice or three times the amount now estimated.

These very suggestive facts and others brought out in the discussions occurring between the members of the institute have made them all doubly anxious to see more of the South. Though they were unable to meet at Birmingham at this time, the splendid program of sightseeing and royal

entertainment arranged by the local committee at Chattanooga has caused each member to feel fully repaid for any disappointment, because of the change of program, that may have been experienced before his arrival.

The headquarters of the meeting has been at the new Hotel Patten, which is easily one of if not the finest and best-equipped hotels anywhere in the South. The program at Chattanooga has included not only the reading of scientific papers, the presidential address of Dr. John Hays Hammond, trips by automobile to Chickamauga Park, Missionary Ridge and Lookout mountain, but also an excursion to Hale's Bar, on the Tennessee river, where the river is being bridled for power and navigation purposes by an immense dam being constructed as a private enterprise under Federal supervision. This work will develop about 56,000 horse-power and add immensely to the progress of Chattanooga. A trip was arranged to visit the mines and furnaces of the Roane Iron Co. at Rockwood, Tenn. When the members of the institute have not been either seeing points of historic or scientific interest or engaged in the reading or discussion of papers on various subjects they have been vined and dined and autotomiled all around the country, and have, in short, had this, their ninety-third meeting, made not only interesting and profitable, but exceedingly pleasant.

The people of Chattanooga have established a record for hospitality that, when the time comes, it will be hard for their Birmingham friends to beat. From Chattanooga the engineers went on the 6th to Ducktown to spend a couple of days there visiting the mines and smelting plant and in studying the occurrence of copper.

#### In and Near Cochrane.

Mr. John T. Cochrane of Mobile, Ala., president of the Tombigbee Valley Railroad Co., writes to the MANUFACTURERS' RECORD:

"Cochrane is the present southern terminus of the Alabama, Tennessee & Northern Railroad. We have laid off a nice townsite there, same being about two miles south of our drawbridge across the Tombigbee river. This town has several new stores just started, a ginning outfit, new warehouse, a handsome hotel building, and many nice residences are now going up. We have erected a nice freight and passenger depot there and established a daily freight and passenger service.

"The territory tributary to Cochrane is as fine a farming section as there is in the State of Alabama. It being in the Black Belt part of the State, the cotton and cottonseed production is excellent. We figure that we will get approximately 10,000 bales of cotton for shipment from this point. We will also get a proportionate amount of cottonseed to carry to the mills, either on our line or the Mobile & Ohio.

"In addition to this, we reach a hay territory producing alfalfa in great abundance, and this industry is being developed very fast. We have already shipped quite a lot of alfalfa from Cochrane. I believe that this is going to yield a large revenue to the people in that section, as well as to the railroad."

Messrs. Longino & McDowell, Capital National Bank Building, Jackson, Miss., contemplate developing a water-power and transmitting electricity for manufacturing and lighting, about 2000 horse-power being available. This power is located near several manufacturing towns.

The assessed value of real estate in the District of Columbia is \$255,324,834, an increase over last year of more than \$8,000,000.



## TEXAS RICE POSSIBILITIES

When Perfect Drainage Is Added to Irrigation.

[Written for the Manufacturers' Record.]

It is estimated that the rice crop of Texas this year represents \$8,000,000, of which \$4,000,000 went to growers and \$4,000,000 to furnishers of supplies, etc. These figures are those of Mr. W. S. Delery of W. S. Delery & Co., civil engineers and contractors, of Houston, who, in a letter to the MANUFACTURERS' RECORD, says:

"Enclosed please find report of rice acreage in Texas for 1908:

	Acreage.	1908.	1907.
Canals and districts.		5,500	6,080
Matagorda canal.		10,500	10,000
San Jacinto canal.		300	300
Rioth canal.		2,505	2,505
Miller Bros. canal.			4,245
Buckeye canal.		1,900	1,528
Stewart Bros.; Savage, Bruce & Civ.		9,000	4,889
Trespalacios.			400
Bay City canal.		3,500	3,284
Adams bayou.		2,200	500
Osoola canal.		1,500	1,200
Onishi canal.		4,500	5,600
Gravely canal.		8,000	3,500
Frost canal.		4,000	5,000
Sheldon canal.			11,700
Raywood canal.		9,000	9,585
Northern canal.		10,237	10,146
Lone Star canal.		6,500	7,896
Moore-Cortes canal.		10,000	9,646
Old River canal.		9,000	7,950
Port Arthur canal.		16,000	9,000
McFaddin canal.		16,000	17,000
Beaumont canal.		21,000	23,000
Neches canal.		4,000	5,400
Farmers canal.		4,200	3,500
Eagle Lake canal.		9,000	13,500
Kenchloe canal.		5,000	5,500
Colorado canal.		2,800	3,520
Security canal.		3,000	3,000
Cow Bayou canal.		2,000	5,500
Victoria canal.		8,500	13,000
Southern canal.		4,800	3,000
Taylor's Bayou district.		2,250	2,230
Websters district.		2,500	4,260
Angleton district.		2,100	2,000
Katy district.		6,700	5,500
Ganado district.		5,100	4,680
Chesleville and Eagle lake.		3,000	3,535
Louise district.		3,340	3,340
Orange canal.		1,500	1,720
Garwood district.		1,260	2,470
Myakawa district.		1,150	1,720
Palacios district.		12,690	7,900
El Campo district.		1,900	1,720
Friendswood district.		1,700	
Des Moines canal.		1,300	1,500
Clark canal.		1,000	
Waterhouse canal.		2,500	
Scattering.			
Total.		244,332	254,438

"It may interest you to know that this acreage has been planted for four years, and that the area planted in rice in this State in 1900 did not exceed 40,000 acres. This, to me, is a remarkable achievement when we take into consideration the short space of time in which this was accomplished, converting the raw prairies into grain fields. This acreage represents an investment as follows:

"Canals and pumping plants, \$9,773,280.

"Lands and improvements, \$12,216,600.

"Live-stock and implements, \$2,196,000.

"Making a total investment of \$24,185,880.

"To plant this land and operate these plants requires an outlay each year of \$3,900,312. From this investment we earned last year, in round figures, \$8,000,000 gross. From this deduct \$4,000,000 operating expenses, and it leaves us \$4,000,000 profit, and to those furnishing us with supplies we paid \$4,000,000. With a favorable harvest season we will increase the net profits this season \$2,000,000.

"This is simply marvelous to me. Now, with perfect drainage and a man to farm each 100 acres of land, we can expect a gross earning of three times this amount. All of this has been accomplished by main strength and awkwardness. No attempt has been made to farm scientifically. Every provision is made to irrigate the lands for the three months in which irrigation is necessary, but no attention is given to drainage, which is absolutely essential nine months in the year. Thirty days can be consumed in flooding the lands for the first time without damaging the crop, but three days is the limit in which the water should be drained off. This is true in planting season as well as in harvest

season. Great results may be looked for when we reach the perfect drainage stage of this industry.

"The writer cultivated 1000 acres of rice in Matagorda and Chambers counties, and the average yield per acre for the five years

was 14.10 barrels of four bushels each per year, and during that period I had one 80-acre tract of land that was perfectly drained and properly cultivated, but not fertilized, that made an average yield of 22.80 barrels of four bushels each year per acre. This will give you some idea of the possibilities of this coast country. It is possible to irrigate every acre of these lands by gravity, which will save \$1,000,000 annually. Keep your eye on the rice industry."

## WHEN ONE SOUTHERNER WENT HOME.

By J. B. Goode.

[Written for the Manufacturers' Record.]

I read your famous appeal to ex-Southerners, "You all had better come home," and it struck me so forcibly that I decided to run down into my old home State of Mississippi and see what was really going on. The fact that I invested \$67,000 in the Worthington plantation of 2482 acres, besides \$10,000 for the live-stock and personal property, tells its own story better than any words of mine could do. I want to add right here that I would not take less than twice that amount for it.

My father was Col. Martin Wade Goode of the Sixty-sixth Mississippi, and I was raised on his cotton plantation on Pearl river, where he freed 327 slaves, after fighting for his rights four long years in the rebellion. I was a small boy then, and the saddest part of my life was passed on that old plantation, on which the levees broke, the negroes were freed and would not work, and my poor old father withered up into a broken, aged and tottering invalid, worrying over his fall from wealth to poverty. I well remember the old gentleman wandering around among the willows and the small "islands of cultivated land out of the thousands of acres which he had once made blossom like the rose." The desolation and ruin all around us left a strong impression on my young mind, and when I finally succeeded in getting my father to sell the old plantation for a mere song and move to Texas, where he invested his few thousands left to him in "black, waxy prairie land" at \$2 per acre, which he subsequently sold for from \$50 to \$100 per acre, I was firmly convinced that no power on earth could induce me to return to that grand old Commonwealth again. I am glad to add that the success that attended him in his new home seemed to give my father a new lease of life, and that I had the pleasure of his company in my home until he was 90 years of age, burying him in Chicago in 1900, "in the cold and shivering North, away from all he loved."

But what I set out to say is that I have never seen so many possibilities of successful farming as are presented to one in the Yazoo Delta, and, in order to explain what I mean, I do not think I can do so better than to explain my plans for farming my own plantation. In the first place, I want to explain that I have 1200 acres of protected river bottom land in cultivation, with 300 acres more which can be put into crops very easily. I also have 138 acres in a fine wild pecan orchard, averaging about 30 large trees per acre, each of which will, with proper care, produce about 500 pounds of pecans, worth now only about six cents per pound wholesale. I am now securing the services of an expert grafter who can graft all of these wild pecan trees with paper-shell pecan buds within three years' time, so that I will soon be producing paper-shell pecans, worth about 35 cents per pound, thus making this orchard pay me about six times as much as it does now. There are millions of these wild pecan trees in the Yazoo Delta, all waiting for live, energetic

owners to do the same thing—make them pay six times as much as they do now, which can be done very easily.

I also have about 100 acres of Bermuda grass, which will easily carry one big brood mare and her mule colt on each acre of it, and these I am now picking up in St. Louis to ship to the plantation this fall. Each one of these mares will produce a mule colt worth from \$50 to \$75 in one year, and worth from \$75 to \$125 the second year, and worth from \$125 to \$200 each at five years of age. As they increase in numbers I will increase my Bermuda in the canebrakes, and on my accretion lands, to care for them all without feeding, and with very little attention all the year around. As a source of cash profits income I do not know of any other investment that will pay such enormous profits without the possibility of loss.

Of the 1500 acres of tillable land, I am now preparing to plant about 600 acres in alfalfa, and as I now have a few acres which are paying me nearly \$100 per acre per annum, I think I can see enormous profits in my alfalfa, which grows luxuriantly in all parts of the Yazoo Delta.

I am also preparing to plant 200 acres in sugar-cane, 100 acres in broom-corn, 100 acres in peas and clover and the rest in corn and cotton, arranging for a perfect rotation of crops from year to year. I am also arranging to plant 100 acres in pears, figs and other fruits, all being a sure crop in the Delta. I am also purchasing 10,000 cottonwood and poplar trees to plant on my accretions from the Mississippi river, and as these trees grow very rapidly, and are in great demand, I think I will soon be able to make all of my unprotected lands inside of the levee productive. My

lakes are already stocked with game fish, thanks to our Legislature, and we have the finest fishing on earth, barring no place and no country. In the fall and winter our rivers and lakes are teeming with wild geese, ducks and other water fowl, and it is nothing uncommon to see a hunter return with 50 to 100 fowls, after a few hours' hunting, running his "brush-boat" into Leota Landing, only a few hundred feet from home, where the negroes meet us to carry in our catch or killing for us. Then we are within less than 100 miles of "Teddy's Bear Jungles," in Louisiana, where we can get the best hunting on earth, going and coming in our own gasoline yacht.

As to health, I want to say that most of this country has been cleared up and in cultivation for many years, and I can show you any number of both white and black children, from 8 to 15 years of age, who were raised right here, who never had a chill or fever, or a pair of shoes, in their lives. The great drainage districts now being put in will soon drain the last stagnant pond or lagoon out of the Delta, and thousands of acres are now being reclaimed and put in cultivation every year.

The question of labor has always been a serious one in the Delta, simply because the owners of plantations have refused to try to raise anything but cotton, and have thought that the negro was the only labor that could be used in its production; in fact, many thousands of poor white people in the cold and crowded North and East believe that nothing but negroes and alligators can live in the Yazoo Delta, when the facts are that most of it is the healthiest, most pleasant and most productive land on earth. I have 33 three to five-room tenant-houses, with 26 colored families now living in them, giving me about 100 "cotton pickers and choppers." I am now shipping down 10 white families, whom I know well, and who know me, and expect to build 20 more tenant-houses for white people this winter. I believe I can and will soon settle this labor question in this way, for it is the best poor man's country on earth, and I am prepared to prove it to all good working people who want to get out of the North, where they have to work six months each year to keep them the other six months, into a country where the sun shines 11 months in the year and ice is a rare thing, even in the middle of winter.

St. Louis, Mo., October 1.

## SOUTHERN POULTRY OPPORTUNITIES.

[Special Correspondence Manufacturers' Record.]

New Orleans, La., September 26.

Steadily-increasing industrial activities in the South, with the consequent rise of new manufacturing centers and the swelling of population in older cities and towns, are emphasizing more and more the opportunities in that section in dairying, poultry-raising, etc. About three years ago Mr. E. P. Dankmann, president of the Nuttallany Lumber Co., established the West Meadow Poultry Farm, now known as the Hammond Stock Farms, Ltd., on the outskirts of Hammond, Tangipahoa parish, on the main line of the Illinois Central Railroad, 53 miles north of New Orleans, with a view to substantiating his belief that the poultry industry could be made a satisfactory enterprise for the South. The logic of his judgment is indicated in the facts and figures of results of his enterprise.

The writer recently visited this modern farm, and found a tract of 40 acres enclosed, the tract being devoted entirely to poultry and pet stock, pedigreed dogs and registered hogs. There are some 65 buildings on the farm, with a floor space of

40,000 square feet; a brick and cement incubator house, with an incubator capacity of 15,000 eggs; a 200-foot double broodhouse, well equipped with a hot-water system; a 200-foot breeding-house; a 200-foot pigeon loft; a double brooder-house for ducks, together with colony houses for growing stock, and a large house for laying stock.

The stock consists of some 14 varieties of thoroughbred poultry—a flock of 300 Toulouse geese, 2000 pigeons, 3000 ducks having been raised this season—Poland China hogs, English bull terrier and Scotch collie dogs.

They have installed every improvement necessary to operate a modern plant on a large scale. They are at present experimenting in the growing of various food products—Kaffir corn, sunflower seed, oats, corn, alfalfa and hemp—and have had a reasonable amount of success with all.

The stock is being bred for both utility and exhibition purposes, and from the number of blue ribbons displayed, they have evidently met with a marked degree of suc-

cess in the latter, as they show prize ribbons from Georgia, Alabama, Mississippi, Louisiana and Arkansas.

The great centers of consumption that can now be reached by the increased development of transportation facilities will naturally promote the selection of locations best suited to the industry, because of natural conditions, and it will gradually centralize in favored areas. When one stops to consider the enormous value of poultry now raised, one wonders why that most profitable industry has been so long neglected, and why the poultry industry in the South has been so little developed.

A 1905 statement from Government statistics showing the relative valuation of stock raised in 10 middle Western States and 10 Southern States follows. The valuation of poultry as given is based on nothing under three months:

Iowa.....	\$31,250,071.53
Illinois.....	29,522,408.70
Ohio.....	28,803,678.95
Missouri.....	27,414,191.30
Indiana.....	22,656,277.42
Kansas.....	20,959,979.51
Michigan.....	14,305,343.36
Wisconsin.....	13,841,620.15
Minnesota.....	12,195,555.23
Nebraska.....	10,657,720.70

\$211,606,846.85

Texas.....	\$20,365,942.14
Kentucky.....	11,532,830.32
Tennessee.....	9,410,129.12
Arkansas.....	7,867,559.29
Mississippi.....	7,713,758.08
Virginia.....	7,491,607.10
Alabama.....	5,851,856.85
Georgia.....	5,235,941.22
Louisiana.....	4,612,331.55
Florida.....	1,351,517.72

\$81,483,517.39

That means \$130,123,329.46 in favor of the Western group. The figures indicate what the South, with its advantages of climate and fertile soil, where three or more crops of foodstuff can be raised each year, should do in the production of poultry.

T. S. Scanlan has been in charge of this farm ever since the property was secured by the present owners, and to his efficient management is largely due the success of the enterprise. In a letter to Capt. J. L. Merry, general immigration agent of the Illinois Central Railway, he said:

"This farm \* \* \* was formerly known as the West Meadow Poultry Farm, and was operated on a limited scale until purchased by the present owners, about one year ago, when its area was increased from 10 acres to 38 acres, many new buildings and a large variety of fancy poultry being added. We have incubator capacity for 15,000 eggs, and are installing a large machine with a capacity of 150,000, with brooder-houses sufficient for the output. We breed exhibition, utility and fancy market poultry, also supply guaranteed fresh eggs. The breeding stock we now have consists of 5000 chickens, 3000 ducks, 150 geese, 1200 pigeons, consisting of the following breeds: Barred, buff and white Plymouth Rocks, white and Columbian Wyandottes, Rhode Island reds, buff Cochins, light and dark Brahmas, S. C. white, brown and buff Leghorns, S. C. black Minorcas, B. B. red games and buff Cochin bantams, Toulouse geese, Pekin ducks, Homer pigeons, bronze turkeys. In addition to the poultry, we have raised Scotch collies, English bull terriers and Irish setters.

"The climate here is admirably adapted to the poultry business. The cost of building is much less than in the North, and we find open houses preferable. While we are somewhat troubled with roup and canker, the disease most prevalent among the poultry is sore head, and while not necessarily fatal, it is very annoying to young stock.

"We find a ready market for all the poultry we can raise, and at a good price. Our best season comes at a time when the markets in the North are the highest, and it affords us an opportunity to dispose of

all our market poultry and eggs at a good price. We feel assured of the future success of the farm, and contemplate many more improvements in order to be in position to supply the ever-increasing demand for poultry and eggs, as well as exhibition stock."

It seems that, with the splendid success experienced with the Hammond Stock Farms, just as good results can be gained through the entire Southern country. The consumption of poultry is many, many times greater than afforded by the local market, and there is no good reason why it should be necessary for the people of Memphis and New Orleans, in fact, of any of our Southern cities, to be compelled to go to the Northern market for their poultry.

EDW. O. WILD.

### FOR BETTER AGRICULTURE.

#### Illustrations of the South's Marketing in Other Parts.

In a plea for greater attention to training in farming in the educational system of the South, Mr. J. S. Kuykendall, secretary of the Chamber of Commerce of Greensboro, N. C., makes the following statements:

"Recently I took occasion to visit every merchant in Greensboro, which has a population of 42,179, for the purpose of ascertaining what amount of farm products were imported from other States. The following statistics are the result of my investigation:

#### Farm Products Imported Into Greensboro From Other States for the Year 1907.

	Cars.	
5,940 tons of hay.....	306	\$118,800
367,500 bushels oats.....	294	239,300
45,000 bushels wheat.....	10	51,750
5,325 tons bran and shipstuf.....	426	149,300
27,775 barrels flour.....	1185	138,875
67,880 bushels corn.....	99	61,110
Meal.....	36	7,560
109,500 bushels potatoes.....	219	98,550
480,000 pounds cabbage.....	240	72,000
9,800 bushels navy beans.....	14	21,000
26,000 barrels apples.....	360	108,000
175,000 pounds cheese.....	35	29,750
6,250 bushels lima beans.....	10	13,125
54,000 pounds butter.....	2 1/2	18,360

\*If all flour and wheat products were calculated in bushels, the number would be 206,625 bushels.

"While in Hickory, in Catawba county, one of the leading wheat-growing counties of the State, with a population of 7000, recently, I visited the merchants of that city, and upon investigation found that Hickory imported from other Northern States wheat and wheat products amounting to \$51,000. If the entire State of North Carolina imported from other States the \$133.72, which was the amount imported for every family in Greensboro, the State of North Carolina alone would have paid \$53,488,000 into the treasury of other States North for wheat and wheat products in 1907.

"In 1907 Guilford county, North Carolina, consumed 488,946 bushels of wheat and wheat products, and produced 174,000 bushels, and imported from other States 314,946 bushels, for which was paid the sum of \$283,451 for wheat, one of the most staple products, which in 1907 made an average of 27 1/2 bushels per acre by six of the leading farmers of the county, who observed modern methods and gave the same attention to their farm that a banker or successful merchant would give his business.

"There is not a city of any size in the Southern States which does not import butter from Illinois and other Northern States in enormous quantities. I know of one retail merchant in Durham, N. C., who has imported an average of 1000 pounds of butter a month for the past three years. Think what the South's butter bill must be! We possess the natural resources, and should be sellers instead of buyers of all kinds of dairy as well as farm products.

"In 1907 North Carolina had 127,000

acres of hay; the average production was one and one-half tons per acre, 190,000 tons; the average value was \$16.50 per ton—a total of \$3,135,000, the value of North Carolina's hay crop for that year, when for the same period it consumed 486,000 tons, or 296,000 tons more than the State produced, aggregating in value the sum of \$4,884,000, which North Carolina sent to Northern States.

"The price of hay in Iowa is \$8, while in North Carolina the price is \$16.50, or more than double that of Iowa. Just in proportion to the production and consumption of the State is the price it pays for this staple product. North Carolina produces more tons per acre to the actual acreage cultivated than any State north of North Carolina, and what is true of North Carolina may be said of most, if not all, of the Southern States.

"We endow colleges, build churches and schools, and we pride ourselves in them, but have our schools done the work which was intended for them? The hitherto agricultural South must have agricultural training."

### FOR FARMS AND FACTORIES.

#### The Ideal Location of Alexandria in Louisiana.

[Special Cor. Manufacturers' Record.]

Alexandria, La., September 26.

In the growth and development of the great State of Louisiana no city of the State has shown more rapid progress than the city of Alexandria. Situated, as it is, in the geographical center of the State, on the banks of the Red river, in the midst of vast pineries north and west, with undulating prairies which reach to the sea on the south, and fed by seven railroads which traverse this rich section of the country in all directions, it is an ideal location for the establishment of factories of all kinds and for the development and manufacture of the products and natural resources of this favored territory.

Alexandria has about 16,000 population, and has made great advancement in recent years as to public buildings and municipal improvements. The city has 56 miles of paved sidewalks, about 14 miles of paved streets and a thorough system of sewerage and drainage. It owns its water-works and electric-light plants. The supply of purest water is obtained from flowing artesian wells from a depth of about 1000 feet.

Alexandria has a magnificent public school system, with a central high school which cost about \$60,000, a public library, handsome churches of every denomination and a new hotel erected at a cost of \$750,000. It is preparing to erect a \$75,000 City Hall. Here is located the courthouse, said to be one of the finest in the South, of Rapides parish.

In the way of manufacturing industries, Alexandria now has two oil mills, two large sawmills, three large planing mills, one excelsior factory, one mattress factory, one lath and picket mill and one large brick factory. We are now negotiating for the location of a stave and barrel factory, a hardwood mill, a brush factory, a broom factory, a handle factory and a central sugar refinery. It is only a question of time when these industries will come, and many others of a like character.

Rapides parish is recognized as one of the banner parishes of the State of Louisiana. The parish is cut in twain by Red river, the great navigable water-course upon whose banks the cotton and sugar planters built their magnificent estates in the ante-bellum days.

The valley or alluvial lands of Rapides parish are unsurpassed for their fertility and productiveness. They are specially adapted for the growing of cotton, cane, corn, hay, potatoes and all varieties of truck. These lands are very valuable, but

can be bought ranging from \$50 to \$100 per acre.

North of Alexandria on the east banks of the river lie the pine lands of the parish. Thousands of acres of these lands have been cut over by the great sawmill industries, and can be easily cleared for farming purposes. They are specially adapted for the growing of fruit and truck, but with a little cultivation and fertilization have demonstrated that one can grow also splendid crops of corn and cotton and the more staple crops.

Just three miles from Alexandria has been located by some of our enterprising citizens an experimental farm to demonstrate beyond question of doubt just what these lands will yield. This experimental farm has been aptly designated as Pinehurst, and it is raising fine apples, peaches, strawberries and blackberries and all varieties of vegetables, of which two or three crops can be made; in fact, something can be planted every month in the year.

In addition to these well-known products of the soil, many new and valuable additions are being made, such as the camphor tree and grapes. These pine lands can be purchased from \$2.50 to \$10 per acre, and offer unlimited opportunities to the homeseeker. M. L. ALEXANDER,

Secretary Progressive League.

### For Fair Play for Railroads.

The Railway Business Association, composed of corporations and companies manufacturing railroad supplies, has been organized "to advocate and in all honorable ways endeavor to secure fair play to railroads in matters of Federal and State legislation; to favor such adjustment of transportation rates as will be equitable and adequately remunerative to the railroads, to arouse among all those who make their living by serving railroads and the manufacturing interests allied therewith a sense of active loyalty to their common interests, which shall manifest itself in defense thereof when subjected to unjust attack." The officers are:

President, George A. Post, president of the Standard Coupler Co.; vice-presidents, H. H. Westinghouse, vice-president Westinghouse Airbrake Co., Pittsburg; O. H. Cutler, president American Brake Shoe & Foundry Co., New York; W. H. Marshall, president American Locomotive Co., New York; E. D. Keith, president Keith Car Manufacturing Co., Sagamore, Mass.; A. H. Milliken, president Pettibone-Milliken Company, Chicago; O. P. Letchworth, president Pratt & Letchworth Company, Buffalo; treasurer, Charles A. Moore, president Manning, Maxwell & Moore, New York.

Executive committee, W. G. Pearce, vice-president Griffin Wheel Co., Chicago; W. V. Kelly, president American Steel Foundries, New York; N. G. Prout, vice-president Union Switch & Signal Co., Pittsburg; J. S. Coffin, president Railway Supply Co., Franklin, Pa.; N. Paul Fenner, Jr., president American Valve & Meter Co., Cincinnati; E. L. Adrian, vice-president William Sellers Company, Philadelphia; M. A. Kittredge, vice-president Barney & Smith Car Co., Dayton, Ohio, and J. F. Dixon, president Dixon Car Wheel Co., Houston, Texas.

### To Irrigate 1700 Acres.

Arrangements are being made by the Del Monte Irrigation Co. of Abram, Texas, for irrigating 1700 acres of farm lands. The company was incorporated in July and organized with L. E. Bennett as secretary-treasurer. It is now inviting bids and plans for the irrigation plant, to include the usual machinery—engines, boilers, pumps, pipe lines, etc.



## NEW ENSLEY STEEL RECORDS.

## A Feature of the Situation in the Birmingham District.

(Special Cor. Manufacturers' Record.)

Birmingham, Ala., October 5.

It is a hard matter to diagnose satisfactorily the iron market. Those who have iron of current make to sell almost invariably quote it on the basis of \$13 for No. 2 foundry. On this basis evidence of sales are readily produced that cannot be questioned. Yet if you have your eyes and ears open and your senses acute, you are liable to run up on sales or offers on a \$1 lower basis. While the basis of \$13 for No. 2 foundry is generally accepted as current value of the market, the evidence is very convincing that it was offered on a \$1 lower basis, and some sales of the low grades were made on the lower basis, and they footed up to a respectable amount. The most plausible explanation of this eccentricity is that it was a house-cleaning of undesirable grades or qualities, and the price to move them quickly was made. It is generally the case that there is only a limited field available when it comes to unloading such stock, and there is no regular differential between its value and that of the popular grades.

Among the sales of the week was one lot of 2000 tons running low in silicon, say 1.75 per cent. and above, on basis of \$12.75 and delivery the present quarter. Two lots of 1000 tons each sold, one at \$13 and one at \$12.75 for No. 2 soft, and both for delivery this quarter. One lot of 400 tons sold on basis of \$12.75, delivery this quarter. There was one sale of analysis iron that went at \$14 to Denver, the lot being 300 tons. Small lots ranging from car lots to 300 and 400 tons went at from \$13 to \$14, according to the specifications required. The effort to find specific evidence of sales at a basis of \$12.50 brought no fruit. But it is entitled to a verdict of "guilty, though not proven." In the case of the \$12 offer the evidence is direct, and cannot be disputed. But no sale at that price is acknowledged, and that fact leads one to suspect that there was a string tied to it that prevented sale. Bluffs sometimes adorn a tale and point a moral. But one sale was reported during the week for delivery during the first quarter of the coming year. The amount involved was 5000 tons, and the price was \$13.25. This is the only sale of moment for some time past for this delivery. Concisely stated, the market is on the basis of \$12.75 to \$13 for No. 2 foundry, with an occasional jumping over the traces and a cutting of values.

The Williamson Furnace Co. filed its articles of incorporation the past week, the incorporators being B. F. Wilson, John F. Fletcher and George D. Brittain. The company is capitalized at \$25,000. It proposes to operate the furnace and manufacture castings and machinery, operate coke ovens and mine coal, etc.

There is very little to be said of the scrap-iron market. The prices prevailing during the week were just the same as prevailed the preceding week, and the demand was not so good as that of the previous week. The quotations as furnished by Weller & Co. are as follows:

Old iron rails, \$16.  
Old iron axles, \$14.  
Old steel axles, \$14.50.  
Old car wheels, \$13.  
No. 1 railroad wrought, \$13.  
No. 2 railroad wrought, \$11.50.  
No. 1 country wrought, \$11.  
No. 2 country wrought, \$10.50.  
No. 1 malleable, \$10.50.  
Machinery castings, \$11.  
Wrought-iron pipes and flues, \$11.50.  
No. 1 steel, \$10.50.  
Store plate, \$9.  
Cast borings, \$7.

The Tennessee Coal, Iron & Railroad Co. has contracted with the firm of John Mohr & Sons for a 600-ton metal mixer for use at the steel plant at Ensley. It will be placed alongside the one it has been using. That one is a 250-ton mixer. They have been making some new records at the mill during the past month, which are given with all the sanction of authority. They show the results attained during the past month compared with their next best record. While they show a satisfactory improvement, the management are full of confidence that they will in the very near future attain still better results. Improvements are constantly being added to the mill, and it is the ambition to make this Ensley mill one of unrivaled efficiency. The September record is as follows:

	September.	Best previous record.	
	Tons.	Tons.	Date.
Alice.....	7,532	7,452	Aug., '08
Bessemer No. 4.....	6,238	6,123	Aug., '08
Open hearth.....	43,366	41,469	July, '08
Bloom mill.....	40,968	39,056	Aug., '08
Roll mill.....	34,032	32,240	Aug., '08
Hard ore.....	124,555	124,339	March, '07
Brown ore (Greely).....	19,440	19,140	Aug., '08

The reports concerning the cast-iron pipe interests continue to be very flattering, and they would be hard to please if they were dissatisfied with the prospects that are seemingly so bright for them. A very prominent interest in the pipe trade says:

"During the past week we have learned of work which will come up in the next 60 or 90 days, which leads us to believe that there is every prospect of pipe business opening up at an early date to an extent which will exceed 1907.

"The city of Milwaukee will buy 4000 tons, St. Paul 3000 tons, and the city of Baltimore will buy 4000 tons.

"Letting during the coming week will be held at Lenoir, S. C.; Richmond, Va.; Hope, Ark., and Kansas City, Mo.; total tonnage of 4000 tons will be placed at these four points. In addition to this, there are numerous smaller lettings in the West. The most important letting of last week was held at Boston, a Boston contractor having placed with the United States Company 14,000 tons for Cienfuegos, Cuba, principally 20-inch, which we understand will be made at Bessemer.

"Our company today declined an order for 50,000 feet of six-inch on basis of \$20, which shows that we are somewhat optimistic."

Another interested pipe plant talks in the same optimistic way. What they say is a forerunner of largely-increased business operations. Just now they are the messengers of glad tidings, for they bring the news of the turning of the business tide and its flow into the sea of prosperity.

The recent success of the United States Cast Iron Pipe & Foundry Co. in securing the large orders recently awarded for Cienfuegos, Cuba; Cleveland, Ohio, and Jackson, Miss., has had a surprising effect in stimulating prices on this commodity in the South and West, possibly because of the decision to manufacture the bulk of this tonnage at their Southern plants. One interest has recently found it advantageous to decline an offer for large tonnage at a price that would net it more than \$1 per ton above price at which similar business was accepted a month ago. There are few lettings to add to the list of those given you last week. There is a strong expectation of a decided rebound in business activity after the election, many buyers preferring to hold back their orders until after this event.

Our machine and foundry shops are not running to their full capacity. Neither are they at any other important point you can name. Just to show that they are doing some business here we report the following orders lately received by the Har-

die-Tynes Machine & Foundry Co.: One 500-horse-power Corliss engine sold to Boston parties, and one of 600 horse-power sold to the Kaul Lumber Co. One of 350 horse-power was sold to the Jackson Lumber Co. at Lockhart, Ala., and one of 250 horse-power to a new mill being erected at Newton, Miss. Besides these, it sold to the Clear Creek Coal & Coke Co., which is controlled by Columbus (Ohio) parties, a heavy hoisting engine with double cylinder and double drum. You can add to these another heavy hoisting engine with double cylinder and single drum. The selling of these engines to Boston and Columbus parties by this district deserves special mention, for it indicates so clearly the progress we have made in such lines, Boston and Columbus coming to Birmingham for their engines. The fact awakens thought, for it goes without saying that cost and quality were duly weighed.

J. M. K.

## IN RESURRECTED TURKEY.

## Possible Markets for American Manufactured Products.

Samuel Hurwitz, exporting and importing agent at Jaffa, Palestine, writes to the MANUFACTURERS' RECORD:

"There are most likely in the United States some pushing people who can give the Arabs lessons in the arts of the Americans, and who will find in a resurrected Turkey a new outlet market for their products. Since the constitution was proclaimed new longings and new business projects are cropping out on every hand.

"The new Minister of Commerce, Gabriel Efferadi Novadoun, has called upon specialists and scientists for advice as to the construction of roads and the equipment of artificial irrigation stations.

"The city of Jerusalem, which up to this time, with its 120,000 inhabitants, has gotten along without proper water supply, now seeks a company to supply it regularly with water upon a practical plan. Local groups are now forming, which are ready to aid in such a laudable enterprise with money and influence. Some preliminary work of investigation had already been done, but the administration heretofore existing had given no opportunity for success to the noble project.

"Jaffa is visited every summer by from 4000 to 5000 people in search of health, since the inhabitants of the country round about hold the local sea baths in high esteem. Year by year the number of these guests increases, but to this day there is not a bathhouse, and the bathers must dress and undress on the open strand, and are at times exposed without possible rescue to the risks of the waves. A local merchant, M. Schoenberg, intends with the aid of German capital to lay out a street and build a hotel for the water-cure visitors, with promenades, etc., shortly.

"Jaffa has 300 orange gardens, embracing 1500 hectares, and with its 50,000 inhabitants necessarily needs large quantities of water. The Ode river is only about seven kilometers from the city, and ample enough to supply the town and the outlying settlements with all the water needed for usual purposes, as well as for power and electricity. The Germans have, therefore, again put in their petitions for water concessions for electric lighting and power, as well as for canalization. They also wish to build railways.

"From 12 to 14 kilometers distant from Jaffa is an enormously rich Jewish colony, 'Petach Tikvah' (Door of Hope). These people suffer terribly from miserable transportation and road accommodations; more than 100 persons travel to and fro from Jaffa, and from 10 to 12 tons of freight are carried the same distance daily, not to mention, in season, 8000 to 10,000 hecto-

liters of grapes and wine every two or three months, and 60,000 to 100,000 cases of oranges, almonds, grain, etc., not readily estimated, during the same period of time. There are at this place 400 to 500 orange gardens irrigated by from 50 to 60 motors of 5 to 17 horse-power each. The community is very much dissatisfied with such a paltry system, and some of the more progressive citizens desire a general irrigation plant as well as suitable field and freight tramways (railways); but unfortunately these people are politically too downtrodden to initiate a movement to that end on their own account. They would, however, welcome an enterprise such as they wish in that direction, and would give it hearty support. The proprietors of gardens and plantations, who are not up to differences in prices, are in search of a petroleum firm which will name them, once for all, a fixed price at which petroleum shall be delivered to them for their work at regular intervals. The local law forbids storing large quantities of petroleum in any one place."

## American Public Works.

The American Public Works Association at its convention at Asheville last week elected the following officers for the ensuing year: President, Edward J. O'Brien, General Contracting Co., New Orleans, La.; first vice-president, M. F. Cole, R. D. Cole Manufacturing Co., Newnan, Ga.; second vice-president, Morgan Llewellyn, Walsh & Weidner Boiler Co., Chattanooga, Tenn.; third vice-president, Wm. H. Flint, American Machine & Manufacturing Co., Charlotte, N. C.; secretary, Maurice Thomas, Atlanta, Ga.; treasurer, Fair Dodd, Atlanta, Ga.; executive committee, Richard C. Huston (chairman), Huston Engineering Co., New Orleans, La.; E. G. Ladd, Morava Construction Co., Chicago, Ill.; James E. Brady, John H. McGowan Company, Cincinnati, Ohio; George A. King, George A. & William B. King, Washington, D. C.; George O. Tenney, Atlantic Bitulithic Co., Richmond, Va.; James W. Rollins, Jr., Holbrook-Cabot & Rollins Corporation, Boston, Mass.; Joseph Slicer, Atlanta, Ga.; Charles C. Wilson, Columbia, S. C., and C. F. McKenzie, John H. McKenzie Sons, Augusta, Ga.

## To Develop 10,000 Horse-Power.

Dispatches from Scottsburg, Va., state that the Talley's Falls Improvement Co. is completing arrangements for the development of the water-power at Talley's Falls, on the Dan river, five miles south of Scottsburg, about \$1,000,000 to be expended. It is estimated that from 10,000 to 12,000 horse-power can be developed and transmitted by electricity to manufacturing and lighting plants in Virginia and North Carolina, including various mining properties in the Virginia-Carolina copper belt. It is understood that the development of this power would facilitate the development of low-grade copper deposits not heretofore utilized because of the need for power at a low cost.

## To Enlarge Car Works.

The management of the American Car & Foundry Co. of St. Louis has taken initial action toward providing additional manufacturing facilities. This company has purchased for \$35,000 a site upon which will be erected an additional plant costing about \$200,000. It is understood that plans and specifications have been prepared, and that the construction of the necessary buildings will begin soon.

It is estimated that during the past fiscal year more than 20,000 families, representing at least 85,000 persons, were added to the population of Texas by immigration.

# CURRENT EVENTS AS VIEWED BY OTHERS

## FOR ALL KINDS OF POLITICIANS.

[Lieutenant-Governor Chanler of New York.]

I want to say that so far as I shall have anything to do with the present campaign nothing shall be added to the abuse and personal warfare, of which we have already had too much. Let us remember that although we are members of parties and believe in them, we are first of all Americans. No party has the monopoly of virtues any more than a monopoly of sins.

Behind every great party are American citizens whose choice is to be respected. Therefore should we hold in profound respect the men who have been honored with nomination by the party which opposes ours. This is not political. This is true American citizenship. Our cause is too great to permit our forgetting it while we assail the characters of those on the other side, for both sides make up the great republic, and the patriotism of all the people, regardless of political affiliation, is bigger than any party can ever be.

## TEXAS PROPERTY VALUES.

[Dallas Times-Herald.]

According to the Texas Commercial Secretaries' Association, the commercial value of property in Texas is estimated at \$5,000,000,000, distributed as follows:

Agriculture.....	\$2,600,000,000
Town and city.....	1,000,000,000
Public-service corporations.....	500,000,000
Other property.....	900,000,000
Total.....	\$5,000,000,000

Of this property, about \$200,000,000 is exempt from taxation. All church, school, asylums, etc.; State, county, municipal property; growing crops; farm products in the hands of the producer; household furniture to the value of \$250 for each household is exempt from taxation.

Our property divides in percentages as follows:

Agriculture.....	54 per cent.
Town and city.....	21 per cent.
Public-service corporations.....	10 per cent.
Other property.....	15 per cent.

The commercial value of property is higher than that usually rendered for taxation, and it is estimated that an average of 60 per cent. of the value of property was rendered for assessment this year. The property was rendered for taxes about as follows:

Agriculture.....	\$1,069,300,000
Town and city.....	413,000,000
Public-service corporations.....	350,000,000
Other property.....	339,248,000
Total.....	\$2,171,548,000

The assessed valuation of property last year was \$1,635,297,115. This year the property values show an increase of \$536,305,248 over last year.

## FOR A CANNERY.

[Hattiesburg News.]

The movement recently inaugurated in Hattiesburg for the establishment of a canning factory is taking form, and there is every reason to believe that the new industry will materialize.

It is a notable fact that most of the canned fruits and vegetables sold on the Hattiesburg market are produced in other States, sold through wholesalers and jobbers in New Orleans and other cities and retailed here at many times the cost of original production.

The fact is equally well known that the soil tributary to Hattiesburg is much better adapted to the growth of fruits and vegetables than in many sections where the fruit and vegetable industry has grown to enormous proportions.

One wholesale grocery house in Hattiesburg purchased in another State and sold

to the retailers of this territory last year \$250,000 worth of fruits and vegetables, which could just as easily have been raised at home.

It is the purpose of Hattiesburg business men now engaged in the organization of a canning factory to encourage and foster the fruit and vegetable-growing industry in this territory, and to ultimately supply the needs of this territory from the fields adjacent to the city, thus saving to the community the many thousands of dollars now sent to other cities of the country and entirely lost from the channels of local trade.

## THE AUTOMOBILE NUISANCE.

[Richmond Times-Dispatch.]

London and Paris forbid the use of the streets to smoking and odoriferous motor cars. This is one respect in which the two great European capitals are a lap ahead of any American city. Americans continue to permit their eyes and nostrils to be offended for the indulgence of motorists who are unable or unwilling to equip themselves acceptably.

Smell and smoke are not necessary by-products of the automobile. Properly made and properly tended machines give out neither. Hence those machines which offer both stand convicted of structural or acquired deficiencies. In either case the owner is at fault. Ignorant or indifferent, he whizzes gaily along his way, leaving behind a trail of effluvia which render him offensive to his fellow-citizens. Is there any good reason why he should be permitted to take his pleasure at the expense of everybody else?

The city limits the speed of automobiles, compels them to take out licenses and display numbers, directs them to carry horns and lights at night. It might also with eminent propriety require them either to be smokeless and odorless or cease to operate in public.

## FOREST FIRES AND THE LAKES.

[Toledo Blade.]

An incidental loss by forest fires, not recognized among the usually expected damages, was the heavy injuries to vessel owners and insurance men caused by the dense fogs of smoke which lay on the waters of the lakes for nearly a month.

According to a dispatch from Detroit, the aggregate loss will amount to more than \$1,000,000. Thirty boats met with disaster in the course of 14 days. Several of the steamers ran aground; others were sunk through collisions, and at least one was burned because of mishaps brought about by the haze.

Forest fires are almost inexcusable in a day so far advanced in civilization as ours. They are among the preventable evils. Most of them are started by the carelessness of some camper or hunter, or by a railroad company which permits locomotives to scatter sparks "whither the wind listeth." Every forest of any size should have a patrol system. Underbrush should be cleared out, and dead timber, fallen boughs and sawmill refuse carried beyond the point where they are likely to spread flames in case of fire. Carelessness starts the blaze, negligence permits it to be fanned into a resistless sheet of destruction.

The lake men and the insurance people have good reason to complain against the owners of timber land in the Northwest. It is not impossible that they might make good any case brought against them. Such an attempt might help, at least, to force the establishment of staffs of foresters.

## AMERICANS IN CANADA.

[Boston Transcript.]

The reference to the American element in the Canadian Northwest is not often encountered in considerations of Canada's future. It seems to be taken for granted that the Americans who have immigrated thither have agreed to forget all their national traditions, and, on taking a new allegiance, to be prepared to render themselves an integral part not merely in Canadian, but imperial public opinion. No occasion testing their disposition to cast their lots with Great Britain as distinct from the Dominion has arisen, and the American colonization is too recent to afford even a hint as to the correctness of Goodwin Smith's suspicion of annexation motives. The great cause of their resort to the Dominion is plain enough. They were "following the wheat belt," and they have unquestionably found it. They are prospering, and apparently are on good terms with their neighbors of Canadian extraction. Their time is so taken up with developing the resources of the country that they have little leisure for a distinct political organization if the desire is present. That if so minded they might become a factor in politics is evidenced by their numbers, which may equal 200,000. No other colonization on this continent by Americans has reached similar proportions or quite presented analogy. Texas was Americanized by immigrants who had been cordially welcomed and encouraged by Mexico. These Americans were not vipers warned on the Mexican hearth, though they were stigmatized as such, and the Canadian rule is so different from that of Mexico as to offer no inducement for the appearance of Houstons and Austins.

## TWO CENTS TO ENGLAND.

[New York Mail.]

Three days ago it cost five cents to send a letter to Great Britain. Now it costs two cents. The Government will carry your letter 6000 miles at the same charge exacted for carrying it across the street.

Not all of us have foreign correspondents in the old country. Not all of us have the letter-writing habit. Yet there are many millions of persons in this country of Irish, English, Welsh and Scotch descent who have relatives or friends in the United Kingdom with whom they exchange frequent letters. The British are our best customers, taking \$600,000,000 of our goods every year, or one-third of our entire export trade. It will be a big saving to them as well as to our own merchants that henceforth this trade will carry a stamp tax which has been cut a full 60 per cent.

A real step, and a big one, was put to the credit of civilization this week when "penny postage" with Great Britain went into effect.

## WIRELESS TELEPHONING.

[Pittsburg Dispatch.]

Successful telephoning without wires over a distance of 50 miles is announced by the British navy. This feat was accomplished with an American inventor's device, and the result is a contract for installation. The conversations were held between ships going full speed at sea.

It is quite another question whether telephony without wires can be made practicable on land, amid many disturbing influences. We shall not attempt any predictions on either side of this question. It is enough to recognize and applaud the successful accomplishment of the wireless telephone for communication between ves-

sels at sea when 50 or more miles apart. There is a great field of usefulness there. And it may be extended to life-saving stations and lighthouses along the shore, to the great benefit of humanity.

## MONEY SAVERS.

[New York Sun.]

Ten years ago the building of good roads in Maryland was begun by the State Geological Survey. The results were an object lesson to the people, who were so impressed with the advantages of scientifically constructed highways that they were heartily in favor of the bond issue of \$5,000,000 authorized by the Legislature last winter. The new fund is to be used in the making of 1000 miles of highways throughout the State within the next five years.

So Maryland is to expend \$1,000,000 a year in building these main arteries for wagon transportation. The personnel of the new commission of six members seems to assure the judicious expenditure of the money. The State Geological Survey is represented on the commission by its director, Dr. W. B. Clark, by Governor Crothers and by President Remsen of Johns Hopkins. The commission is laying out the 1000-mile system and the construction of the entire work will be in charge of the engineers of the Geological Survey. There was a very loud demand from the press of Maryland, from the business associations of Baltimore and from the agricultural societies for wise conservation of this fund so that every dollar of it might contribute fully to the economic purpose in view; and there is no reason to doubt that the fund is properly safeguarded against political manipulation.

Twenty years ago we seemed a century behind Europe in this important phase of civilization. Now many of our States are carrying out well devised plans for road improvement. Good highways are money savers. By turning a very poor road into a fine highway we reduce the cost of haulage by from five to seven cents a ton a mile. We still have wagon roads as poor as some in China, where the cost of coal freightage is so high that the commodity cannot be carried to a market over 25 miles away.

## ACTIVITY AT BIRMINGHAM.

[Birmingham Age-Herald.]

Before the first day of next month it is stated that four more blast furnaces in this district will be blown in, making 26 all told in operation. Twenty furnaces are turning out about 140,000 tons of pig-iron a month, and the addition of four would carry production to 165,000 tons, possibly 170,000 tons, and that would give the district an output of activity and prosperity. Production would then be not merely normal, but prosperously so.

Much credit for this exceptional situation is due to the Steel Corporation. Here at present that great hive of industry makes its open-hearth rails. But this does not tell the entire story. The old struggle of the survival of the fittest goes on, and when the price of iron is low this district begins to be felt in the iron trade. Iron can be made here at a profit when it cannot, when made elsewhere, put any net money in the pockets of producers. When this district can load its No. 2 foundry on cars and get \$13 for it iron-making here is not profitless, and there is a demand for it. The stove and the implement and the pipe makers want it. It is excellent foundry iron. It flows freely. In the making



of all these castings it is unexcelled, and then again it is needed in the wide world of soft steel.

This is why our blast furnaces are going into operation. This is why this district's output will soon be normal. It now stands at 85 per cent., while the other districts have to be content with an output not exceeding 60 per cent. This is why skyscrapers are going up and our general condition becomes exceptional.

#### MINE DISASTERS.

[Boston Herald.]

The statistics of the geological survey do not confirm the popular idea that the majority of mining disasters are due to explosions. The chief causes of death in the mines are falling roofs and coal, due to insufficient and careless timbering. These are remediable causes. While the problem of fire damp and of explosive gases may defy final solution, the problem of adequate timbering for the protection of workmen is simple enough. It is false economy for society, if not for the individual mine owner, this saving of money in timbering and in otherwise safeguarding the operations; it wastes money in human lives sacrificed to neglect. The mine owners of Pennsylvania are already moving toward securing greater safety for their workmen. Perhaps if liability laws were better enforced in this country, so that the burden of loss came upon the mine owners, the responsibility would be better appreciated by them. And possibly if society realized that human life possesses a material value, that each laborer, as a productive force, constitutes a definite resource of the country's wealth, the nation, whose heart is not touched by the tragedy of the mines, might be aroused to an appreciation of the cost of this annual waste of life.

#### ANARCHY.

[Cotton Oil News.]

Cotton night riders will find that they have a different crowd to deal with in the South to what the tobacco night riders had to deal with in Kentucky, where the people were in sympathy with such movement, and where a trust had really oppressed the people. There is no cotton trust, except in so far as it has been created a trust by the spinners and societies, who called for the abolition of the bull support of cotton by anti-option laws in the South, greatly to the advantage of the consuming world.

The night riders are usually composed of a class of men who reck little of the far-reaching consequences of their work. Gins are ordered to stop, insurance companies cancel the risks on such gins, those who own the mortgages on all such gins unpaid for foreclose, wholesale merchants refuse credit to merchants in smaller towns, and the merchants in smaller towns are forced to call for the cotton, whether in the lint or in the seed, and general demoralization sets in, and after all, nothing is accomplished.

#### TIME TO CO-OPERATE.

[Wall Street Summary.]

Fanned by political cunning, what was originally an honest intent was converted into an epidemic of wrath more destructive and leveling, as subsequent events have proved, than the evils sought to be overcome. It is high time for the interests dependent upon the railroads to co-operate with the carriers and make common cause against the enemy. It is gratifying to see that the campaign is to be fought in the open, and that the slogan is "fair play."

#### A MILLION ACRES OF OIL AND GAS.

[El Reno American.]

The last report of the Oil Producers' Association shows nearly 1,000,000 acres in the State of Oklahoma leased for oil and gas development. About \$130,000,000

has been invested in the Oklahoma field, which has been opened but a few years. The State geologist in a recent report says:

"At the present time no one knows the extent of the field or the amount of oil that may be produced; but, judging from present developments and the stratigraphy and structure of the rocks in the regions yet undeveloped, one is safe in making the prediction that the Oklahoma oil field is destined to become the largest and most prolific so far discovered on the continent."

#### In Its Own People's Hands.

[Chattanooga News.]

One of the distinguished men at the convention of the American Institute of Mining Engineers is Richard H. Edmonds, editor and publisher of the MANUFACTURERS' RECORD at Baltimore. Discussing the business conditions of the country with a Chattanooga News man, Mr. Edmonds said:

"Throughout the country there are signs of a gradual revival in business interests, but we are still far from normal conditions. It was not possible for the stagnation of last winter to continue very long, for however great may be any business depression, some trade is always under way, wear and tear go on steadily, population increases, the land yields its crops, which must be moved regardless of financial upheaval or industrial cataclysm. And so after a few months of almost total paralysis signs of revival were seen and we are now moving along slowly toward higher ground.

"The country's progress is now held in check only by political conditions and the hysteria which has swept over the land. Men of money are afraid to venture far or plan for large undertakings while the whole country is in such a state of unrest. Every wild theory of the most radical kind finds its advocates, regardless of whether or not it tends to rank socialism and the destruction of all individual initiative and conservatism in financial and governmental affairs.

"The South, of all sections, needs to be conservative. It has almost limitless resources, but their development has hardly been touched. They are like buried talents, valueless to their owners or to the public until quickened into life by the magic wand of capital. Of what avails our vast stores of coal, far in excess of all Europe's coal supply, unless developed and made to furnish the power for the expansion of our material interests? What good is our iron ore, greater in quantity than the known ores of the rest of the country, if it is to be buried forever in our mountains?

"The United States Steel Corporation is now spending at the new town of Gary, Ind., \$75,000,000 in building an iron and steel plant which will make more iron and several times as much steel as are made in the 14 Southern States. This one plant will cost about as much as all the iron furnaces in the South, and to this enormous investment will be added an even greater amount for subsidiary plants. And yet to reach that locality the ores have to be hauled 750 miles and the coke 450 miles. In the South, with ore and coke almost within rifle shot of each other, we are adding but little to our iron and steel-producing capacity, while the North and West are making such giant strides, as illustrated at Gary. But progress is not confined to that plant alone, gigantic as it is, for dozens of furnaces are under way or projected at other points. In the whole South there is scarcely a single new furnace under construction. The North and West are spending, or preparing to spend, probably \$200,000,000 on furnaces and steel plants, and the South almost nothing. What is the matter? Where is

the trouble? Nature has favored us above all other lands. We have been blessed with mineral wealth, with water-powers, with agricultural capabilities beyond any other land, but other lands are far outstripping us in material progress. About 1890 we were making much greater progress in proportion to what others were doing than we are today. At that time the whole South was enthusiastically working for railroad expansion, for industrial up-building and for bringing in outside capital. So eager were the people for more railroads that counties and towns were constantly bidding against each other in offering large bonuses to secure the building of some new line. Everywhere there was enthusiasm and vim and energy for material advancement. This has not, of course, wholly changed. We have made substantial progress, and there is still much enthusiasm for the utilization of our great resources. But we are not pulling together as we were then. We are missing the power of 'team work.' Our people and our legislative assemblies are too much absorbed in cross-roads politics. We are too prone to hamper railroad development and to make it difficult, if not impossible, to secure new capital for railroad expansion. The Steel Corporation is building the immense plant at Gary and independent concerns are spending millions on other plants in the North and West because they are in the center of an almost limitless consuming market. If the South would see such vast expenditures as are being made elsewhere it must help create a home market for steel rails and other finished products. It must encourage the investment of hundreds of millions so much needed for the betterment of our railroad facilities; it must make capital feel that no other place on earth can offer greater opportunities for profit, and at the same time guarantee greater protection. Whatever may be the cause, capital does not now feel that way. Twenty years ago it did, and then the moneyed people of Europe and the East for a time ran a race to see which could take a more active part in Southern development. They are not doing it now, and the South has to fight for every dollar of outside money secured for its upbuilding.

"The South's progress is in the hands of its own people. They can hasten the day when throughout this land shall be heard what has been called the music of progress, 'the whirr of the spindle, the throb of the locomotive, the buzz of the saw and the roar of the furnace,' or they can indefinitely retard the utilization of our dormant resources and bring upon our country the curse which befell him who refused to put his talent to use, but buried it in the ground.

"Despite the disadvantages, however, under which the South has been laboring, it is making great progress. When we have thrown off the fetters we shall move forward twice as rapidly as we have been doing. Then the South will no longer have to see its own people go elsewhere to find scope for their activities. Then the industrial and railroad development, city building and all that unite to give employment to brains and energy, as well as to brawn, will give to the young men of the South more alluring opportunities than any other place on earth can offer. With a proper appreciation of the heritage which nature has given to this favored land, with a realization of its ability to support a larger population than that of the entire country at present, and with resources which justify a greater industrial output than the United States now has, the people of this section may well stand appalled at their opportunities and their responsibilities, for to whom much has been given, of him shall much be required."

## MINING

### Developing Oklahoma Coal Mines.

With reference to its coal-mining operations in Oklahoma the Oklahoma Coal & Mining Co. informs the MANUFACTURERS' RECORD that it has opened its No. 1 mine, in Okmulgee county, and is at present producing 100 tons of coal per day. This mine is equipped with the gravity plane haulage, having a double entry, and will be developed to an output of 250 tons per day. Mine No. 2 is in course of equipment, from which it is expected to develop a production of 1000 tons per day. This is a slope, and will be operated by steam power throughout. It has a 42-inch vein of bituminous coal, and from one opening it is expected to work an area of 500 acres. As soon as the construction work on this mine is completed work will be commenced on mine No. 3, which will be similar to mine No. 2. The company has other coal lands in Oklahoma which it expects to develop in the near future. It is capitalized at \$50,000, with J. W. Hoffman, president; R. Lee Hale, secretary, and W. W. Gresham, general manager in charge of development and construction work. The president's office is at 618 Bryant Building, Kansas City, and general offices at Henryetta.

### Tidewater Coal Shipments.

A statement of tidewater coal shipments from the West Virginia fields for August shows a total decrease as compared with shipments during August, 1907, of 356,986 tons, and for the period from April 1 to August 31 there was a decrease of 1,288,625 tons as compared with the corresponding period last year. Among the railroads showing an increase during August is the Norfolk & Western, whose shipments increased 20,645 tons as compared with the same month last year, and the Chesapeake & Ohio, whose shipments show an increase of 51,672 tons.

### West Virginia Mining.

In our notice last week of this week's meeting at Charleston of the West Virginia Mining Association the name of the president of the association was printed incorrectly. He is Mr. William N. Page of Ansted, W. Va., and he is also president of the Virginian Railway, which is to become an effective agency in the development of West Virginia mineral wealth. The program of the Charleston meeting, which will include a trip to Princeton, Mercer county, was published in last week's issue of the MANUFACTURERS' RECORD.

### New Coal Selling Company.

The Norfolk & Chesapeake Coal Co., recently incorporated, will establish a branch office at Roanoke, Va., about November 1. This company succeeds the H. T. Wilson Coal Co. and the Hull Coal & Coke Co. as selling agents for the "Red Jacket" and "Lomingo" coals, well-known products of West Virginia. Its general offices will be at Detroit, with branch offices at the principal Western market points. Officers of the company are H. T. Wilson, president; Edward R. Johnson, vice-president, and W. H. H. Dorney, secretary and treasurer.

### For Tennessee Developments.

Articles of incorporation have been issued in Maine to the Tennessee Timber, Coal & Iron Co., capitalized at \$500,000, for the purpose of developing coal, iron and timber properties in Tennessee. P. G. Bolster, Boston, is reported as president, and T. L. Croteau of Portland, Maine, as treasurer.

The basis for assessment in Baltimore this year is \$675,162,276, an increase over last year of \$27,179,680.

## RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

### Kanawha & Michigan Report.

The Kanawha & Michigan Railway Co. has issued its eighteenth annual report, which covers the fiscal year ended June 30, 1908. It shows total operating revenue, \$2,022,938; operating expenses, \$1,708,639; net operating revenue, \$314,299; operating income after taxes paid, \$234,849; total available income, \$398,904. After the payment of interest, rentals, etc., the net income was \$128,391. Deducting betterments to the property, there was left a surplus for the year of \$11,498.

The company laid during the year 4117 tons of new steel rail of 90 pounds per yard at various points, including 17.5 miles from Witcher to Boomer, on the West Virginia division, the total length laid being 27 miles. Gravel ballasting was put on 14 miles of line, including 13 miles of the West Virginia division. The channel span of the Ohio river bridge at Point Pleasant was replaced with a heavy steel truss span, and contracts were let for the remaining spans and the viaduct approaches. Upon the completion of this work the entire line will carry consolidation engines and 50-ton cars. The most important improvement of the year was the completion of one mile of new line at Langsville, Ohio, shortening the road one-third of a mile and eliminating 360 degrees of excessive curvature upon which steel rails lasted only three years, with correspondingly severe wear upon wheels. This new line includes a tunnel 700 feet long.

The company also built three plate girder bridges, with a total length of 214 feet, thus: One of 30 feet over the highway at Leon, one of 150 feet over Two Mile creek at West Charleston, and one of 54 feet over Campbell's creek at Dana. The last two replaced old bridges which were too light. Five trestles were filled in and converted to embankment, these latter having a total length of 245 feet. One new station was erected and three were enlarged. A Hobson 10 stalls were added to the engine-house, and at Dickinson a fuel station was erected, in addition to other improvements at both places.

The company has 58 locomotives, 23 passenger cars and 4915 freight cars. Decatur Axtell of Richmond, Va., is chairman of the board; N. Monserrat of Columbus, Ohio, is president.

### Gulf & Magnolia Northern.

The MANUFACTURERS' RECORD has received reliable information that the Gulf & Magnolia Northern Railway Co. proposes to build from Magnolia via Waldo in Columbia county, Arkansas, through the western portion of Nevada county and thence through Hempstead county to Hope, Ark., connecting there with the St. Louis & San Francisco Railroad, the St. Louis, Iron Mountain & Southern Railroad of the Missouri Pacific System and the Louisiana & Arkansas Railway. It will also reach a line extending from Hope to Nashville, Ark. The southern end will connect with the Louisiana & Northwestern Railway leading from Magnolia, Ark., southwest to Natchitoches, Louisiana.

The new line will be 35 miles long and the country through which it will run is fertile, well timbered, and will afford considerable traffic. The company has not yet employed an engineer, but the executive board are negotiating to equip an engineering corps as soon as possible. The surveys and location will be started within 30 days and after this work is finished bids for construction will be in-

ited. The company has \$1,000,000 capital stock, of which \$100,000 is subscribed with 5 per cent. paid in to cover preliminary work. The official headquarters are at Hope, Ark.

The officers of the company are: W. Y. Foster of Hope, Ark., president; J. M. Davis of Waldo, Ark., vice-president; J. L. Davis of Magnolia, Ark., treasurer and Samuel Q. Sevier of Hope, Ark., secretary. The directors are: W. Y. Foster, J. H. Betts, R. M. Briant, A. L. Black, S. Q. Sevier, Hope, Ark.; R. S. Warnock, J. L. Davis, J. M. Witt, W. W. Boyd, Henry Stevens, Magnolia, Ark.; J. M. Davis, Charles Clark, T. S. Cook, Waldo, Ark. Executive committee: W. Y. Foster, chairman; S. Q. Sevier, secretary; W. H. Warnock, Steve Corrigan and M. D. Clark.

### Work on the Southern Pacific.

The Southern Pacific Railway is reported to be doing considerable work on its lines in Texas and Louisiana including the laying of heavier rails. On the Texas & New Orleans Railroad, for instance, 32 miles of 72-pound rails have been distributed between Dallas and Beaumont, but principally between Rockland and Beaumont. Already two miles of the new rail have been laid. They are of open hearth steel from Birmingham, Ala. On the Houston, East & West Texas Railway five miles of these rails are being laid on each side of Nacogdoches. On the Austin branch of the Houston & Texas Central Railway 75-pound rails are being laid. During the year about 40 miles were put in the track, while 15 miles additional are distributed and ready for laying. On the El Paso division of the Galveston, Harrisburg & San Antonio Railway 35 miles of 90-pound rails are on hand and will be laid soon.

Grading has been resumed on the eight-mile branch of the Texas & New Orleans Railroad from Rusk to Gallatin, Texas. This work was delayed by wet weather.

It is reported that the new bridge over the Atchafalaya river on the line from Lafayette to Baton Rouge is approaching completion. This structure is altogether about 1760 feet long. There are six spans each 235 feet long and a draw span of 270 feet, and the latter is soon to be put in place to complete the bridge. The approaches on each side of the river are now under construction.

### Register to Rocky Ford.

A dispatch from Statesboro, Ga., says that application to charter a railroad company has been filed in the Superior Court and it is proposed to build a line from Register, Ga., 10 miles west of Statesboro, on the Central of Georgia Railway, to Rocky Ford, Ga., on the main line of the same railway. The new road will be about 25 miles long. Its capital is \$150,000 in shares of \$100 and the principal office will be at Register. W. G. Warnell of Hagan, Ga., one of the attorneys for the petitioners, is quoted as saying that a survey will begin immediately. A direct line between Register and Rocky Ford would pass four or five miles west of Statesboro. Connections will be made with the Register & Glennville Railroad at Register and with the Georgia Coast & Piedmont Railroad at Glennville. The line would also connect with the Sylvania & Girard Railroad at Rocky Ford, besides connecting with the Central of Georgia, as heretofore described. The local parties interested are G. W. DeLoach, S. T. Ellis, M. A. Smith, D. C. Newton, J. M. DeLoach, L. B. Godbee, P. M. Anderson and W. G. Warnell of Tattnall county, and J. E. Donahoo, J. W. Williams and F. P. Register of Bulloch county.

### Middle Georgia Interurban.

Mr. W. F. Smith writes from Flovilla, Ga., to the MANUFACTURERS' RECORD saying that the survey of a line from Jackson to Griffin, Ga., is being made with the intention of connecting several points. Between Jackson and Griffin is an old graded roadbed, which is intended to be used for an electric railway that is to be operated from the plant which the Central Georgia Power Co. is constructing on the Okmulgee river six miles from Flovilla, and for which that company is building six miles of track from the Southern Railway to the river to transport machinery and material for construction. There is also another old roadbed east of the river between Social Circle, Mansfield and Monticello, Ga., and it is the purpose of the company to connect the lines up with an electric road, which is also to be connected with the Flovilla & Indian Springs Railway, that is now operated with dummy engines. When these lines are joined there will be about 70 miles of railroad which is to be known as the Middle Georgia Interurban Railway. It is further intended to connect at Griffin, Ga., with the Macon & Atlanta Interurban Electric Railway, which is soon to be constructed. Mr. W. Jordan Massee of Macon, Ga., is president of the latter road, and he is also president of the Central Georgia Power Co. The Middle Georgia Interurban Railway has not yet organized.

### Georgia & Florida's Extension.

The Georgia & Florida Railway Co., which is constructing a line from Augusta, Ga. to Madison, Fla., by building connecting links between several railroads purchased some time ago, as heretofore reported, has begun operating its line between Hazlehurst, Ga., and Madison, Fla., on regular schedules, this being 120 miles, with branches amounting to between 20 and 25 miles. This extension of operation was made possible by the completion of the link between Nashville and Valdosta, Ga., and work is now being pushed north of Hazlehurst, Ga., toward Vidalia, which is expected to be completed next spring. This will enable the company to operate from Keysville, about 25 miles from Augusta, to Madison, about 260 miles. While connection can be made with Augusta over the Augusta Southern Railway from Keysville, the Georgia & Florida proposes to build its own line between those points, but that work is not to be taken up until later. To complete the link between Hazlehurst and Vidalia it is necessary to build a bridge over the Altamaha river. The opening of the line from Nashville to Valdosta was celebrated by an excursion and a banquet.

### New Equipment, Rails, Etc.

The Atchison, Topeka & Santa Fe Railway, it is reported, will purchase a lot of 90-pound rails for relaying the line between Tulsa, Okla., and Independence, Kan.

The Harriman lines are reported to have ordered 220 steel passenger cars from the Pullman Company, deliveries to begin within 60 days.

The Electric Manufacturing & Power Co. of Spartanburg, S. C., is reported to have ordered four new double-track cars for delivery in November.

The Carolina, Clinchfield & Ohio Railway has, it is reported, ordered four consolidation locomotives from the Baldwin Locomotive Works. These engines weigh 200,000 pounds, the total weight of engine and tender being 340,000 pounds.

The Birmingham Southern Railroad is reported in the market for 150 hopper-bottom cars of 50 tons each.

It is reported that at a sale of property of the North Carolina Electric Co. at

High Point, N. C., 100 tons of rails were bought by Z. V. Taylor and E. D. Steele at \$16.50 per ton. Another lot of 200 tons was, it is reported, sold to Atlanta parties at \$20.75 a ton.

### El Paso to Fabens Interurban.

Richard Caples, El Paso, Texas, informs the MANUFACTURERS' RECORD that W. B. Latta and he have been granted a franchise to build an interurban railway from El Paso to Fabens, in the Rio Grande Valley, 32 miles. The line will traverse a well populated district and will furnish transportation to the towns of Orms Grove, Ysleta, Socorro, Clint, San Elizario and Fabens. All the land in this district is part of that now about to be supplied with water for irrigation under the Engle (Elephant Butte) project going forward under the direction of the reclamation service of the United States government. When complete the dam, canals, etc., will have cost \$9,000,000. Messrs. Caples, Latta and associates have given bond for \$10,000 that the work will be under way within six months, and that the line will be completed to Fabens in 30 months. The interested parties will meet next week, when incorporators are to be named and a charter is to be secured.

### Connection Will Be Double Track.

The Baltimore & Ohio Railroad has completed a connection with the Pennsylvania Railroad from Aiken, Md., to a point near Perryville, Md., to be used in detouring its trains during the rebuilding of the Baltimore & Ohio bridge over the Susquehanna. Survey for this connection, 4500 feet long, was begun within six hours after the collapse which made the bridge impassable. This new connection avoids a long run over the Pennsylvania to Wilmington, Del. On the west side of the river the Baltimore & Ohio trains are passing to and from the Pennsylvania by means of the latter's connecting line from Swan creek, on the Baltimore & Ohio, to a point near Havre de Grace, but the Baltimore & Ohio will build a double-track connection about 3000 feet long from Osborne to Oakington, so that trains can pass head on without delay. The work is being done by the railroad company, of which D. D. Carothers is chief engineer.

### Mississippi River-Western.

A report from Meridian, Miss., says that the Mississippi River-Western Railroad Co. has organized by electing the following officers and directors: President, K. Threefoot, Meridian, Miss.; vice-president, J. W. Hudson of Memphis, Tenn.; secretary-treasurer, J. A. Gibson of Meridian, Miss.; general agent, W. A. Wall of Raleigh, Miss.; industrial agent, William Cornell of Lake, Miss.; C. T. Williamson of Meridian, C. M. Whitworth of Mendenhall, Miss.; S. L. Ryan and J. A. Porter of Rose Hill, Miss.; F. L. McRae, W. T. Rogers and O. J. Haralson of Silverena, Miss.; W. M. Reed of Ridley, Miss.; J. M. Martin and J. B. Currie of Raleigh, Miss.; B. J. Hamrick of Hickory, Miss., and A. H. Longino of Jackson, Miss. The proposed road, as heretofore stated, is from Meridian via Mendenhall to Natchez, Miss., about 175 miles. It is to have \$2,000,000 capital and \$1,500,000 of 5 per cent. bonds.

### Railroad Notes.

The Kansas City, Mexico & Orient Railway is reported to have completed its line as far as Chillicothe, Texas.

A report from Knoxville, Tenn., says that the Southern Railway has given regular employment to more than 1000 men in its shops at Coster, a suburb.



Since March the shops have been working with reduced forces.

The Virginia Air Line Railway is reported to have put in operation another section of 15 miles from Palmyra to Strathmore, Va., connecting with the Chesapeake & Ohio Railway.

The Norfolk & Southern Railway Co. announces the appointment of J. A. C. Groner as assistant to the general manager, with headquarters at Norfolk, Va. Thomas Fitzgerald is general manager.

R. H. Baker, president of the Trinity & Brazos Valley Railway, has, according to a report from Galveston, Texas, been elected president of the Galveston Terminal Railway Co. to succeed W. E. Green, who recently resigned.

An officer of the Montgomery Lumber Co., Spring Hope, N. C., writes the MANUFACTURERS' RECORD that the railway which it was reported to be building is a good logging road, and it is being constructed in a businesslike manner. Press reports previously said that the line was expected to reach Louisburg or Raleigh, N. C.

The North & South Carolina Railway Co. has applied for a charter in South Carolina to build a line 40 miles long from some point in Marlboro county on the North Carolina boundary to some point in Marion county, South Carolina, capital, \$20,000. The petitioners are W. R. Bousal, S. O. Bauersfeld and Charles Gibbons of Hamlet, N. C.

The property of the Southern Light & Traction Co. at Natchez, Miss., consisting of electric light and gas plants and a street car system of six miles, is reported to have been transferred by Lynn H. Dinkins, the purchaser, to Jonas Levy of New Orleans for \$45,670, the company being subject to a mortgage for \$335,000. Mr. Levy is vice-president of the Louisiana Railway Co., incorporated in Louisiana, with headquarters at New Orleans.

## FOREIGN LETTERS

The MANUFACTURERS' RECORD is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. Some of these letters indicate the disposition of foreigners to buy American goods, and are therefore of interest to our readers.

### Files Wanted for Japan.

Tateish Trading Co., Sajiro Tateish, president, No. 10 Sojurocho, Kiobashiku, Tokio, Japan:

"We wrote you last requesting a party to forward a series of samples of second-hand files, and now there is another party requesting new files. Please write to a member of your association to send us a line of files, which will have orders if fit in price and quality, as files are exclusively imported. We shall pay for the samples if required. We can get orders from many concerns. Please write manufacturers to quote best export prices and commission."

### Oilcloth, Cardboard and Morocco.

R. Greiner, 14 Rue Vulpian, Paris, France:

"I am not interested at present in machinery, but rather in manufactured products, such as oilcloth for bookbinders and morocco goods. I am now in search of such goods. I am also looking for vulcanized cardboard."

### Typewriters for Malta.

Carmelo Cassar, 26 Str. Stretta, Valletta, Malta:

"Please note I have had my demands for typewriters in this island, and want to correspond with manufacturers not represented here."

## LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

### Building Activity Increases.

Building activity in the South and Southwest during September, as evidenced by the permits issued for construction work of all kinds, shows an increase in most of the cities from which reports have been received. In Atlanta not only has the number of permits for new structures been largely increased over September, 1907, but the amount of money invested has been much larger. It is stated that the expenditure for new buildings during the past month will exceed the amount expended during September, 1907, by about \$175,000. Permits issued in Birmingham represent an expenditure of \$243,245, as compared with \$102,210 for September last year, and for the nine months of the present year of \$1,624,565, as against \$1,605,190 for the corresponding period last year. The total value of permits issued in Memphis during September is estimated at \$303,685, an increase over the corresponding month last year of \$23,409. In Knoxville the total value of permits issued is estimated at \$29,430. In St. Louis the value of buildings for which permits were issued during the month is estimated at \$1,483,016, as compared with \$1,065,956 during September, 1907. Building activity in Beaumont is very marked, it being estimated that structures in course of erection represent a valuation of about \$500,000, much of the work being done in the residence sections. Twenty permits were issued in Galveston, representing an estimated value of \$25,900. In Greensboro permits were issued to the amount of \$21,400 during the month. A total of 67 permits was issued in Richmond during September, including new structures, alterations and repairs, the valuation of which is estimated at \$138,981. For new buildings, alterations and repairs in Norfolk a total of 86 permits was issued, having an estimated value of \$161,260, and showing an increase of \$124,185 over the corresponding month last year. A large increase in building operations in the District of Columbia for the last several months is shown by the records of the building department, but figures for September are not available as yet. In Baltimore the value of buildings, alterations and repairs for which permits were issued is estimated at \$476,715, and for the first nine months of the year at \$4,684,943.

### Naval Stores Company.

A new naval stores company, with its main office at 512 Germania Building, Savannah, has been incorporated by B. F. Bullard and R. B. Powell of Savannah. C. L. Johnson, Pierce county, Georgia; A. F. Bullard, W. B. Sellers and P. L. Briggman of Geneva county, Alabama, and A. C. Darling and C. D. Mathews of Covington county, Alabama. The company is capitalized at \$250,000, with the privilege of increasing to \$1,000,000, and will be known as the Bullard & Powell Company. Its officers are B. F. Bullard, president; R. B. Powell, vice-president, and Henry E. Bullard, secretary and treasurer.

### Nashville Builders' Exchange.

More than 60 of the leading firms of Nashville have become members of the recently organized Builders' Exchange of that city. The exchange proposes to have commodious quarters containing desk room for members and as many exhibits of building materials and manufactured products used in building as may be secured. The officers are Messrs. H. W. Buttorff, president; T. L. Herbert, Sr.,

and R. T. Creighton, vice-presidents; John Oman, Jr., treasurer; Haynes McFadden, acting secretary and assistant treasurer, and J. P. Fulcher, Joseph H. Peter, J. A. Cooper, G. M. Ingram, H. Hardison, S. M. Vaughn, J. W. Patrick, H. C. Parrent, T. B. Agerton, A. T. Jones, T. J. Mooney, S. J. Underwood, H. F. Cooper, R. T. Creighton, A. J. Dyer, George L. Phillips, E. T. Lewis, H. W. Buttorff, J. E. Bouchard, A. Moseley Hopkins, John Oman, Jr., T. L. Herbert, Sr., Joseph Warren, Jr., Robert Elliott, Clarence Sutherland, J. N. Means, directors.

### Mill Contract Awarded.

It is announced that R. J. Buckwalter, Union, Miss., has awarded a contract to the McDonough Manufacturing Co., Eau Claire, for the erection and equipment of his proposed sawmill to be erected at Union. The contract provides for a steel and concrete structure to be equipped at first with a single-band mill of 60,000 feet daily capacity, but of sufficient size to install another band mill later, increasing the capacity of the plant to 100,000 feet of lumber per day. It has been previously announced that about nine miles of standard-gauge railroad will also be constructed at a cost of \$50,000.

### Important Timber Development.

One of the most important timber developments recently undertaken in the South is the proposed investment of about \$600,000 by the Sanford (Fla.) Manufacturing Co. for the establishment of a large sawmill at Sanford and the development of about 80,000 acres of timber land. Plans are being prepared for the erection of a plant to have a daily capacity of 100,000 feet of lumber per day and to cost \$100,000. Mr. S. L. Wood, at present of Lakeland, Fla., is the secretary and treasurer of the company, and will have charge of the construction of the plant.

### Shipments from Fernandina.

Lumber shipments from Fernandina are said to be increasing somewhat by reason of a slight advance in prices. Coastwise shipments for September amounted to 6,034,000 feet, valued at \$181,020; foreign shipments 1,425,453 feet, valued at \$42,763; turpentine 847,062 gallons, valued at \$423,381; rosin 30,000 barrels, valued at \$150,495; palmetto leaves 76,575 pounds, valued at \$2305; cedar logs 279 pieces, valued at \$400; cedar pencil slats 100 cases, valued at \$1500.

### Over 600,000 Feet of Pine.

A. M. Walkup of Richmond, Va., advises the MANUFACTURERS' RECORD that he will require from 600,000 to 700,000 feet of merchantable long-leaf pine for construction of timber decking on coal pier at Norfolk.

### Lumber Notes.

It is announced that the American Naval Stores Co. will remove its main offices from Savannah to Jacksonville.

The Pearl Land & Lumber Co. of Shreveport, La., has been incorporated with a capital stock of \$200,000. Its officers are A. N. Ayres, president; Frank J. Looney, vice-president, and J. E. Bell, secretary-treasurer.

### From the Chinese Legation.

Dr. W. W. Yen, secretary of the Chinese Legation, Washington, D. C.:

"Please insert notice in your publication that we desire catalogues for the following kinds of machinery: Windmills for working water pumps; cotton and silk-weaving machinery, worked by wind power preferred; sheep-shearing machines; dredging machines."

## TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

### The Calhoun Mills.

The Calhoun Mills of Calhoun Falls, S. C., is now installing its initial equipment of machinery, including 16,384 spindles and 400 looms, for manufacturing print cloth, 30 inches, 68x72, 4.75 yard. A 1000-horse-power steam plant is being installed, and the mill will be arranged to operate either by steam or the electric drive. Next year the company intends to add 10,000 spindles and 200 looms, there being space for the new spindles in the present building, but a weave shed will be erected to accommodate the new looms. All the machinery has been purchased and is expected to be in operation soon. Some months ago the MANUFACTURERS' RECORD reported the reorganization of this company and its plans for a plant. James P. Gossett is president and E. M. Lander is secretary, both of Williamston, S. C., where correspondence should be addressed until further notice.

### The Parker Plant at Portsmouth.

The Parker Hosiery Mill and Dye Works of Portsmouth, Va., expects to have its new buildings completed by December 15. This company awarded contracts, as recently stated, to Edward Overman of Portsmouth for the construction of the two buildings, which include the hosiery mill, 60x160 feet, and the dyehouse, 40x110 feet, two stories high, of brick. The new Parker mill will cost from \$20,000 to \$50,000, and will be operated entirely by electricity. It will have an equipment of about 300 knitting machines for manufacturing children's and misses' ribbed hose; daily capacity 900 to 1000 dozen pairs. R. C. Bibberstein of Charlotte, N. C., prepared the plans for the new plant.

### Will Consider Increasing Capital.

The Reedy River Manufacturing Co. of Reedy River Factory, S. C., will hold a meeting on October 27 at the office of E. A. Smyth, Greenville, S. C., to consider increasing capital stock from \$200,175 to \$400,175. This company now operates 12,000 spindles and 371 looms, producing sheetings and drills.

### To Install Looms.

It is reported that the Fitzgerald (Ga.) Cotton Mills will install looms for plain weaving. This company now manufactures yarns, having 10,000 ring spindles and accompanying machinery.

### Textile Notes.

The Rockwood (Tenn.) Mills will add a few machines for knitting hosiery.

The Southern Electric & Power Co. of Erwin, Tenn., is considering a proposition for the location of a cotton mill.

The Summerville (Ga.) Cotton Mills held its annual meeting last week, and the management announced that the earnings of the first six months' operation amounted to 11 3/4 per cent. A dividend of 5 per cent. was declared.

A dispatch from Centerville, Tenn., states that the Chickamauga Fertilizer Co. has purchased the phosphate property in Hickman county of Adair & McCarty Bros. for \$15,000 and their Hamilton county interests for \$105,000.

## MECHANICAL

### The Atlanta Steel Co.

In 1900 a few progressive business men of Atlanta, Ga., concluded that the rapid industrial advance of the South and the outlook for its continuance warranted the establishment of a steel mill to relieve Southern steel consumers of the transpor-

scope, until today it has every modern improvement. Next was installed a mill for the manufacture of the light rails demanded by the mining and logging interests of the South, and it was decided to use strictly Southern products in making finished materials. To that end two 35-ton open-hearth furnaces were installed and other finishing mills added. At this time,



FIG. 1.—ATLANTA STEEL CO.

tation costs and the delay in obtaining steel products from other sections. It was decided that Atlanta had superior advantages for such a plant, being well located as a distributing center, with superior railroad facilities and connections, and the necessary raw material for manufacturing steel being readily obtainable. Encouragement from buyers convinced these

in 1906, the capital of the company was increased and the name changed to the Atlanta Steel Co. This company has continued to add to its equipment until it has made its plant equal the needs of the new steel-consuming South. It has in full operation today the following: Two 35 G. T. basic O. H. steel furnaces; five heating furnaces; a 25-inch blooming mill; a semi-

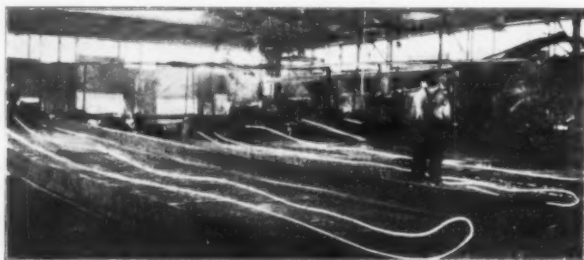


FIG. 2.—ATLANTA STEEL CO.

Atlanta men that the demand for certain steel products would consume the output of a small mill, and they established a plant in 1901 under the name of the Atlanta Steel Hoop Co. Their ideas proved to be true.

Since the mill started it has enjoyed liberal patronage from the entire Southeast, the product going as far as Texas,

continuous rod mill; an eight-inch hoop and cotton-tie mill; an 18-inch light-rail mill; wire-drawing blocks; wire-nail machines; barbed-wire machines; spike machines; bale-tie machines; field fence machines; galvanizing plant, and fully-equipped mechanical and electric departments.

The location of Atlanta as a distributing



FIG. 3.—ATLANTA STEEL CO.

Louisiana and Arkansas. Its first products were cotton ties and hoops, to take care of baling the cotton and barreling the cottonseed oil and turpentine. The reception of the output was so immediate that enlargement was at once imperative. Since that time it has been necessary continually to enlarge and extend the mill's

point for these manufactured articles more than compensates for its short distance from the ore and coal mines. So the company determined upon the present location, and the use of Alabama pig and Georgia ore, and coal from Alabama and Tennessee. This plant has proven of value to consumers of the South.

In the company's blooming mill the ingots are reduced to small billets, because the nature of their output is such that the various mills require small billets.

Next to the blooming mill is located the Morgan semi-continuous rod mill, for rolling wire rods and merchant bars. This

department was installed, where all wire is prepared for the manufacture of barbed wire and for other merchantable purposes.

One of the most popular departments of the entire plant is the nail mill, where wire nails of all sizes, as well as polished and galvanized staples, are made.



FIG. 4.—ATLANTA STEEL CO.

mill is one of the most modern of its kind in the country.

The great demand for steel wire made plausible, and in fact necessary, the addition of a wire mill, in which the rods are converted into steel wire of all sizes. This is claimed to be the first wire mill ever operated in Georgia, and since its establishment has always been run full time for

The recent rapid advance in concrete construction has developed an equally great demand for merchant bars, in the manufacture of which this company is prominent, its output including all standard sizes of rounds, flats, square and twisted bars. A large stock is constantly held to meet contracts demanding prompt shipments. At the plant the facilities for

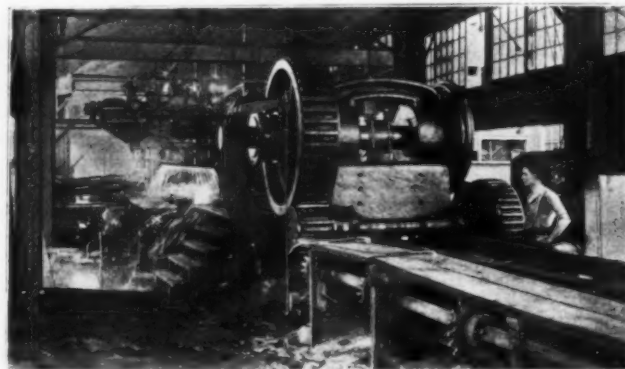


FIG. 5.—ATLANTA STEEL CO.

the manufacture of wire nails, plain steel wire, galvanized wire and annealed wire. The spike mill produces standard railroad-track spikes, now used by nearly all the principal railroads of the South. Realizing the great possibilities of development in this line, the company installed a mill for the rolling of standard T-rail in sizes of 12, 16, 20, 25 and 30 pounds to the

prompt handling of material from the warehouse to the cars, and in some cases direct from the mills to the cars, are utilized. Every possible use is made of large traveling cranes, and the grounds are thoroughly intersected by switching tracks.

The company owns and operates its own yard engines, which makes it in a measure independent of the railroad's convenience,

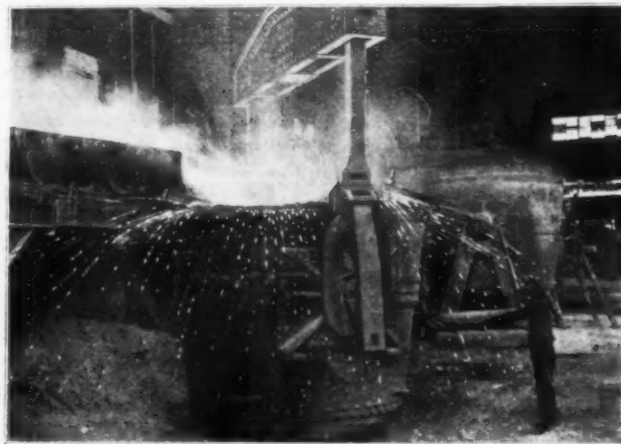


FIG. 6.—ATLANTA STEEL CO.

yard. All rails are rolled from open-hearth steel billets.

The heavy output and large stocks of the rail department and the quick shipment of all orders received have been determining factors in bringing to Atlanta many "rush" orders for plain steel wire, annealed wire, barbed wire and wire nails.

In this connection the galvanizing de-

and enables it to effect the most immediate shipments available to the user of any product which comes from a steel mill.

Herewith are six views in the company's works. Fig. 1 is a partial view of the wire-drawing plant in operation, rolling steel billets into smaller steel bars. Fig. 3 is a partial view of wire-drawing plant in



operation, converting wire rods into all sizes of steel wire. Fig. 4 is the cotton-tie and hoop mills in operation. Fig. 5 is the blooming mill in operation, rolling 2500-pound ingots into small billets. Fig. 6 shows tapping open-hearth furnace No. 1.

The plant is rapidly growing, its output increasing each year since its incorporation.

The Atlanta Steel Co. takes pride in feeling that it has contributed no little to the permanent upbuilding of the South, and derives much satisfaction from the hearty support and the expressed appreciation of Southern buyers. Its officers include Thomas K. Glenn, president and treasurer; C. E. Currier, first vice-president; J. T. Rose, second vice-president and manager of sales; E. H. Inman, secretary.

#### Boiler Test and Mechanical Stoking.

By R. T. COE.

Much interest has been aroused amongst the engineering fraternity and reference has been made in a number of technical journals to the immense new power plant and water-works pumping station at Lardner's Point, Tacony, Pa. All the pure filtered water for the 1,100,000 inhabitants of Philadelphia is handled at this plant. About \$4,000,000 have been expended for buildings and equipment, this being but a small part of the amount Philadelphia

of the test. Care was taken to have the fires in the same condition, as nearly as possible, at the end of the test as in the beginning. The fires were cleaned about the middle of the test and again, as above noted, just before the conclusion of same. The usual pressure, draft and temperature readings were taken at intervals of 15 minutes, and the results given in the test records are averages. A double check was kept on all coal and water weights and measures. Gas samples were collected and analyzed at intervals throughout the test, the average results of which indicated an air consumption of 17.22 pounds per pound of dry coal, and a loss of only .20 per cent. through incomplete combustion of carbon.

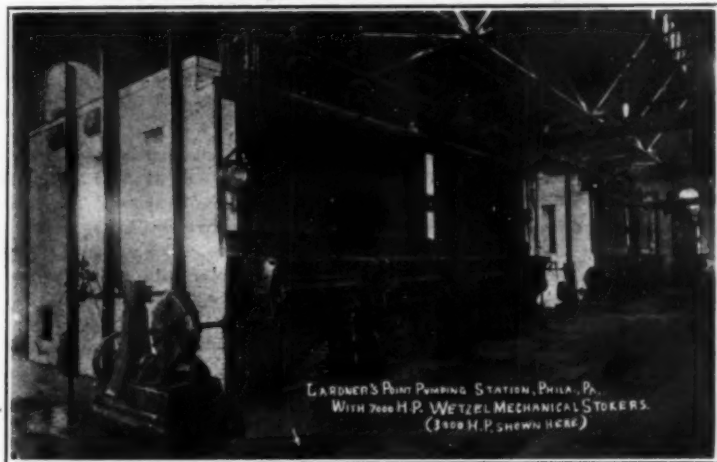
The boiler which was tested is one of the six 500-horse-power Edgemoor sectional water-tube boilers. The boilers are set two in a battery and are connected by underground flues with two Custodis chimneys 7 feet in diameter by 150 feet high above the boiler-room floor. Each boiler comprises two horizontal steam and water drums 34½ inches diameter by 18 feet long, which connect at either end into large rectangular stayed water legs (10 inches wide inside), between which are expanded 254 straight tubes 4 inches diameter by 18 feet long, set on an incline of 1 inch to the foot.

The bottoms of the front headers of the

46,750 pounds, and deducting slightly over 3½ per cent. moisture gave 45,086 pounds of dry coal. The total refuse in the coal was 3168 pounds (equal about 7 per cent.), showing the total combustible (dry

212 degrees F., 529,714 pounds, or 22,071 pounds per hour.

Water evaporated per pound of dry coal under actual conditions, 9.592 pounds; equivalent from and at 212 degrees F.,



LARDNER'S POINT PUMPING STATION, PHILA., PA.  
WITH 7000 H.P. WETZEL MECHANICAL STOKERS.  
(3000 H.P. SHOWN HERE)

#### BOILER TEST AND MECHANICAL STOKING.

started to invest a half dozen years ago to provide pure water.

The engineering of this undertaking by the overcoming of complicated conditions which had to be encountered, the distribution of intakes and outlets, and the locating and building of pumping stations are worthy of special note. Over \$25,000,000 have already been expended, and more millions will be required.

It is the object of this article to call attention to some of the details of the Lardner's Point pumping station, to give the record of an interesting test made and to describe briefly the mechanical stoking equipment which had so important a bearing upon the good results.

A test was conducted early this year to determine what evaporative results and efficiency the boilers and stokers would show with coal of certain quality, and when operating at a capacity 25 per cent. in excess of the builders' rating. The test was conducted in accordance with the general rules advised by the American Society of Mechanical Engineers. Coal and ashes were weighed and water measured in carefully calibrated tanks. Separate feed connections were made and independent feed pumps provided. All unused branches and connections, including blow-offs, were blanked or disconnected. A running start and stop were made, the fires being thoroughly cleaned a certain time before starting and a like time before the conclusion

boilers are set 7 feet above the floor line. Three transverse plates are provided for directing the gases in an upward and downward path across the tubes from front to rear, the gases escaping from the last pass downwardly into an underground flue in the rear of the boilers.

The duration of the test was 24 hours.

Some of the boiler details were: Water-heating surface of boiler, 5052 square feet; width of grate, 2x6 feet; length of grate, 8 feet 6 inches; area of grate, 102 square feet; ratio of water heating to grate surface, 49½ : 1; kind of grate, Wetzels mechanical stoker.

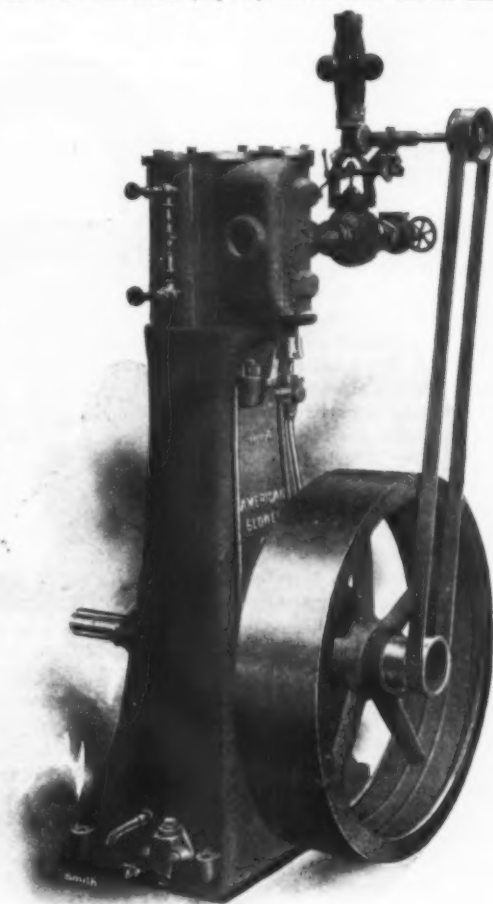
The height of stack above the dead plate was 147½ feet, and the area at top 38½ square feet. The gauge steam pressure in the boiler was 128.9 pounds, the draft in the flue behind boiler .628 inch, and draft in the furnace .335 inch W. G.

The average temperatures taken were: External air, 31.35 degrees F.; water entering boiler, 39.2 degree F.; escaping gases, 475.9 degrees F.

Henrietta coal was used—a semi-bituminous fuel from Columbia county, Pennsylvania, which analyzed: Moisture, 3.56; volatile combustible, 18.75; fixed carbon, 74.82; ash, 6.43; B. T. U. per pound dry coal, 14,770.

The coal made a gray ash and a small amount of non-fluxing clinker which gave no trouble in operating the stoker.

The total amount of coal consumed was



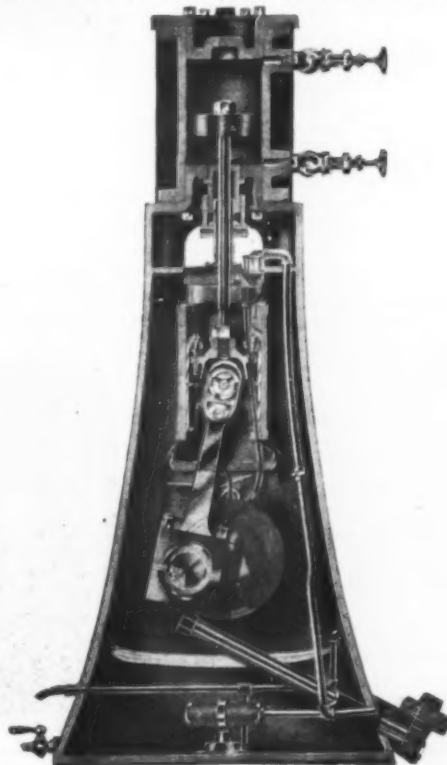
BOILER TEST AND MECHANICAL STOKING.

weight of coal less refuse) 41,918 pounds; the total heat derived from fuel per pound of dry coal, 11,346 B. T. U.

There were 435,547 pounds of water pumped in the boiler and apparently evaporated, but corrected for the quality of

11,749 pounds; equivalent per pound of combustible from and at 212 degrees F., 12.637 pounds.

The water evaporated per hour, from and at 212 degrees F. per square foot of heating surface was 4.368 pounds, and per



BOILER TEST AND MECHANICAL STOKING.

steam (which by calorimetric tests, dry steam being taken as a unity, gave a result of .9029), the water actually evaporated was 432,455 pounds; equivalent water evaporated into dry steam from and at

square foot of grate surface 2164 pounds. Dry coal burned per square foot of grate surface per hour, 18.41 pounds.

Considering the above hourly rates of evaporation and combustion presents in-

teresting results. On the basis of 34.5 pounds evaporation per hour, from and at 212 degrees, the horse-power developed was 639.74 horse-power. The maker's rating being 500 horse-power, the results were a showing of nearly 28 per cent. above the normal rating, with a heating surface of 7.89 square feet per horse-power developed.

The combined efficiency of the boiler and furnace was 46.82 per cent., which is rather exceptional considering that natural draft was relied upon for moving the gases.

Each boiler is equipped with two stokers 6 feet wide; a brick wall 13 inches thick separates the two furnace compartments and serves to divide the stoker arch into two spans. The stokers are of the inclined grate pattern. The inclined or active portion of the grate is 7 feet 6 inches long, while the dump plate at the bottom is 2 feet long. (In figuring the active grate arch half the dump plate was taken into account.) Each battery of boilers is provided with an independent direct-connected American Blower Co. (Detroit, Mich.) fully-enclosed self-oiling stoker engine, which drives, through a worm-gear speed-reducing mechanism, the main operating shaft of the stokers. The feeding and bar-moving mechanisms are operated by separate eccentrics, the extent of movement in each case being regulated by nuts on the eccentric rods.

Every bearing, even for slow-moving shafts, are removable and adjustable, the parts are very heavy (claimed 35 per cent. heavier weight than any other gravity grate stoker), and the repair cost is very light; in fact, the stokers are sold on a unique guarantee. In addition to the usual guaranty against repairs for the first year, the manufacturer agrees that the repairs will not exceed certain fixed sums inside of five years after installation. Every traveling salesman familiar with the back yards of boiler plants will appreciate what that means as well as managers and chief engineers.

The stokers were subjected to rigid tests at the manufacturer's plant. All the boiler fronts erected side by side in one line, every bolt in place, every casting, bearing and shaft located, and inasmuch as they were to run in that position when finally installed, the shipment was not allowed until the "ABC" type "A" engines were connected up to them, put in operation and found perfect in every detail.

Three accompanying illustrations are views of the stokers and the engines.

Boiler-rooms being dirty, and because of the ever-present grit, they are consequently hard places on reciprocating machinery. The driving mechanism of Wetzel stokers meet all demands; the engines are fully-enclosed, self-oiling from pump in the base, requiring no oiling, excepting to fill the cylinder lubricator, oftener than three months or more at a stretch, and no more frequent adjustment.

After the operation of the described equipment about three months, the stokers and engines driving same meeting with the approval of the engineers of Philadelphia, contracts were awarded for an additional 4000 horse-power, making 7000 horse-power in all.

#### Yale & Towne Hermetic Padlocks.

The Yale & Towne Manufacturing Co., 9-15 Murray street, New York, has introduced the Hermetic line of padlocks in three grades of the same general style, each having distinctive features which are principally in the locking mechanism. Fig. 1 illustrates the No. 726 Yale padlock, having the genuine Yale pin tumbler mechanism, each lock being fitted with four pin tumblers capable of practically an unlimited number of key changes, and

packed with two nickel-bronze para-centric keys. Fig. 2 is a sectional view of the annular case, Fig. 3 showing the case complete and the keyway. This novel constructive principle eliminates exposed seams, joints and rivets. The annular case is a single member of cast metal,



FIG. 1.—YALE & TOWNE HERMETIC PADLOCKS.

within the central opening of which are located the locking parts. Both sides of the lock are closed by a strong and rigid steel disk, each of which is expanded into a grooved seat in the case, thus hermetically sealing, as it were, all the interior parts against exposure to the elements or



FIG. 2.—YALE & TOWNE HERMETIC PADLOCKS.

mechanical attack. This principle of construction affords no opportunity for slipping a tool into an exposed joint to force it open, and there are no rivets to file. In addition to these elements of security, the locks are attractive in appearance. Having the same general features are the



FIG. 3.—YALE & TOWNE HERMETIC PADLOCKS.

Cyclox, No. 526, and Loxol, No. 326, all at present having the uniform diameter of two and one-quarter inches, but other sizes may be made later. The Yale is one inch thick, and the other two seven-eighths

inches. The Cyclox is of the lever tumbler or secure lever type, having four double-acting lever tumblers, 144 key changes and two flat steel nickel-plated keys. The Loxol is warranted with six key changes and two flat steel nickel-plated keys. The shackle action of all is of the rotating type, the shackle when released being thrown upward a short distance automatically, when it is free to rotate in either direction, but on being pressed backward into position locks automatically. The shackle is made of steel rod, polished and nickel or brass plated. The annular lock case is of cast iron and the disks are of cold-rolled steel. The "Yale" case is Bower-

#### Baltimore Metal Stampings.

The Baltimore Metal Stamping & Manufacturing Co. was incorporated in July with \$30,000 capital, and acquired the Clifton Cornice and Skylight Works. Its plant has been equipped to manufacture a variety of useful metal articles, including metal ceilings. Building methods have undergone great changes during recent years in the desire to procure fireproof structures, and metal walls and ceilings have materially assisted in attaining this end. Important features of the metal ceiling are its durability and artistic value. As to the latter, note the accompanying illustration of a design, for the center of a



A BALTIMORE METAL STAMPING.

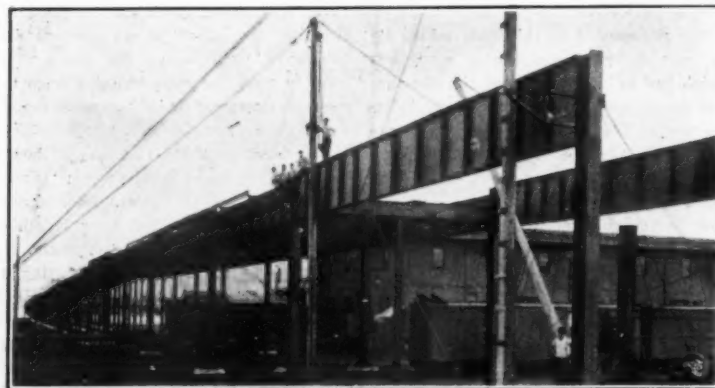
Barff finish, with bronze-plated disks, Fig. 1 reproducing back of case, the front having "Yale" in a one-inch circle. The Cyclox case is brass-plated, oxidized, with rim surrounding disks relieved and steel disks of Libian black. The Loxol case is of Nubian finish and copper-plated steel disks. All of the locks are listed as shown or with nine-inch chains, as desired.

#### The Newton Street Viaduct.

A large viaduct now being constructed in the South is illustrated herewith. It is located on Newton street in Algiers, La., and is 1926 feet 6 inches long, 42 feet wide over all, or 22 feet in the clear,

ceiling, which is surrounded by a different but appropriate design. This is a product of the Baltimore company. The artistic effect can be attributed to the varied and effective designs which are used, as well as to the relief feature. The process of manufacture is simple, the design being stamped by die out of galvanized steel. Considering its many desirable features, the cost of erection is reasonable, and the demand is steadily increasing.

Besides metal walls and ceilings, the Baltimore Metal Stamping & Manufacturing Co. manufactures cornices, metal window frames and sash, metal roofing, gutters and down-spouts, metal signs, acety-



NEWTON STREET VIADUCT, ALGIERS, LA.

with two lines of street cars; driveway and footwalks are on each side. The contract was let to the Ottumwa (Iowa) Bridge Co. by the city of New Orleans; contract price, \$90,000.

Frank Blanc of New Iberia, La., is the sub-contractor and he is erecting the viaduct in person. The Ottumwa Bridge Co. is represented by E. P. Alsbury & Son. Thomas L. Willis is the engineer in charge under the orders of Captain Hardee, city engineer. William E. Joss, C. E., is consulting engineer and designer of the viaduct.

lene-gas machines, tinner's supplies, tin-plate, galvanized iron, corrugated roofing and siding and ocean buoy lights.

The offices and plant are at 429 North High street, Baltimore, Md. W. F. Betzel is president; Patrick J. Moran, vice-president; J. G. Rupp, secretary; William H. Chase, treasurer.

The Chamber of Commerce of Raleigh has elected Messrs. Charles E. Johnson, president; Hubert Royster, first vice-president; Fred A. Olds, secretary, and B. S. Jerman, treasurer.



# Construction Department

## TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

### ADDRESS FULLY

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

### WRITE DIRECT

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

### BRIDGES, CULVERTS, VIADUCTS

Batesville, Ark.—Independence county will construct steel bridge over "Island Slough," near Newark, Ark.; structure to be 120 feet long, with 12-foot roadway and concrete or stone piers; bids will be opened October 22; S. B. Wycough, County Judge. (See "Machinery Wanted.")

Chappells, S. C.—Newberry and Saluda counties will construct bridge over Saluda river at Chappells Depot; bids to be opened October 16; J. Monroe Wicker, Supervisor Newberry county, Newberry, S. C.; B. T. Mack, supervisor Saluda county, Saluda, S. C. (See "Machinery Wanted.")

Charlotte County, Va.—Contract will be let October 19 for construction of 80-foot-span steel bridge. Address P. St. J. Wilson, State Highway Commissioner, Richmond, Va. (See "Machinery Wanted.")

Fort Worth, Texas.—St. Louis Southwestern Railway of Texas, F. H. Britton, president, St. Louis, Mo., will, it is reported, construct bridge at Fort Worth.

Gulfport, Miss.—Harrison county will vote November 3 on issuance of \$50,000 of bonds for building bridges and roads. Address County Commissioners.

Hamlin, Texas.—City of Hamlin and Stonewall county will construct jointly 250-foot wooden-trestle bridge across Brazos river on road from Hamlin to Aspermont, Texas, and awarded contract for erection to Austin Bridge Co., Dallas, Texas; materials purchased.

Lebanon, Tenn.—Wilson county will construct two steel bridges recently noted—one bridge 140 feet; other structure 175 feet; cost \$2000 each. Address J. W. Bradshaw, Lebanon, R. F. D.

Lockesburg, Ark.—Sevier and Howard counties will, it is reported, rebuild bridge over Saline river; A. C. Steel, judge of Sevier county, De Queen, Ark.; J. A. Thomas, judge of Howard county, Center Point, Ark.

Meridian, Miss.—City awarded contract to Missouri Valley Bridge & Iron Co., Leavenworth, Kans., at \$4747 for construction of concrete bridge on 8th street, between Thir-

ty-fifth and Thirty-third avenues, and Rush-Dabbs Construction Co., probably of Meridian, at \$3600 for construction of concrete culvert on Twenty-fifth avenue and 8th street; W. G. Wetmore, City Engineer, P. O. Box 271.

Montgomery, Ala.—A. R. Gilchrist, City Engineer, has approved plans submitted by B. B. Smith, architect, Montgomery, for proposed reinforced-concrete viaduct which the West Virginia Land Co. will construct over railway tracks on Madison avenue to replace present steel structure; plans call for three-span bridge with two supports, roadway being 50 feet wide; estimated cost \$6000; bids will soon be received.

Pine Bluff, Ark.—Hot Springs Concrete Co., Hot Springs, Ark., has contract for construction of concrete culvert over Hardin's drain on East Second avenue, Pine Bluff; cost \$2500.

Savannah, Ga.—John Rourke & Sons of Savannah have contract to construct 15 steel pontoons and 15 33-foot sections of pipe line for use of the Government dredge Morgan; contract price \$8647.50, of which \$7545 is for pontoons and \$1102.50 for pipe lines; Col. Dan C. Kingman, U. S. Engineer, in charge of Savannah district.

Spartanburg, S. C.—Spartanburg county will construct steel bridge known as Hill's over Tyger river; bids will be opened October 19; W. Frank West, County Supervisor; S. M. Bagwell, clerk of Board. (See "Machinery Wanted.")

St. Louis, Mo.—City is considering construction of bridge across Mississippi river near foot of Chouteau avenue; plans are on file at U. S. engineer office, Room 423 customhouse; G. R. Lukesh, captain, engineers.

### CANNING AND PACKING PLANTS

Birmingham, Ala.—Swift & Co., main office Chicago, Ill., will, it is reported, establish packing plant in Birmingham; has purchased building and will improve; plant to consist of smoking and cooling departments, etc.

Bunkle, La.—Bunkle Canning Co. will establish cannery with capacity of 12,000 cans daily; will erect and equip plant and engage experienced operator; president, C. M. Hughes; vice-president, S. O. Starkvine; secretary, S. E. Schmink; treasurer, H. Godchaux. (See "Machinery Wanted.")

Hattiesburg, Miss.—Company is being organized with \$50,000 capital stock by T. S. Jackson, T. M. Ferguson, W. M. Conner and others to establish cannery and syrup factory.

Natchez, Miss.—Natchez Chamber of Commerce, S. E. Davis, secretary, contemplates organization of company to build canning plant.

Natchez, Miss.—R. E. Sturgin, Chicago, Ill., is reported as proposing establishment of cannery at Natchez.

### CLAYWORKING PLANTS

Ardmore, Okla.—Bricks.—Ardmore Brick Co. proposes to install additional machinery, increase capacity to 50,000 bricks daily and construct electric railway to shale deposits. C. C. Framp is manager.

Columbia, S. C.—Granite Bricks.—Granite Brick Co., recently reported incorporated with \$200,000 capital stock, has organized with F. H. Hyatt, president, Columbia, S. C.; B. H. Moss, vice-president, Orangeburg, S. C.; J. H. Bollin, secretary and treasurer, Columbia.

Jacksboro, Tenn.—Bricks.—R. F. Lyemance will not erect brick plant, recently mentioned, until next spring. (See "Machinery Wanted.")

St. Louis, Mo.—Bricks.—D. P. Cooper will establish \$12,000 brick plant.

Valdosta, Ga.—J. M. Youngblood contemplates establishment of brick plant. (See "Machinery Wanted.")

### COAL MINES AND COKE OVENS

Aldrich, Ala.—Montevallo Mining Co. incorporated with \$5000 capital stock by T. H. Aldrich, P. B. Thomas and Albert Latady.

Coalmont, P. O. Helena, Ala.—Cahaba Coal Co. incorporated with \$50,000 capital stock by G. M. Bowers, R. C. Middleton and Albert Latady.

Henryetta, Okla.—Oklahoma Coal & Mining Co., recently noted to open new mine of about 1000 tons daily capacity, has com-

menced construction; slope; operated by steam power; 590 acres to be worked from this opening; when construction is completed company will begin work on similar mine, known as No. 3; other lands to be developed soon; J. W. Hoffman, president, 618 Bryant Building, Kansas City, Mo.; general office at mines, Okmulgee county; post-office, Henryetta; W. W. Gresham, general manager.

Henryetta, Okla.—Franklin Coal Mining Co. incorporated with \$2000 capital stock by M. Meinholtz, William Brink and B. Morgan.

Knoxville, Tenn.—H. T. Hackney Coal Co. incorporated with \$50,000 capital stock by B. A. Morton, H. L. Smith, W. F. Robertson and C. L. Parham.

Tennessee.—Tennessee Timber, Coal & Iron Co. incorporated with \$500,000 capital stock; P. G. Bolster, Boston, Mass., president; T. L. Croteau, Portland, Maine, treasurer.

### CONCRETE AND CEMENT PLANTS

Lagrange, Texas.—H. L. Lange contemplates erection of cement-block factory or warehouse for concrete plant; 34x89 feet; plans not completed. (See "Miscellaneous Structures.")

Little Rock, Ark.—Mills-Darragh Lime & Cement Co. incorporated with \$25,000 capital stock by T. R. Mills, F. J. F. K. and T. A. Darragh.

Montgomery, Ala.—Montgomery Lime & Cement Co. incorporated with \$5000 capital stock; J. D. Kirkpatrick, president; C. F. Wittichen, vice-president, both of Birmingham; C. G. Hume, general manager; A. C. Davis, secretary-treasurer, both of Montgomery.

### COTTON COMPRESSES AND GINS

Cartersville, Ga.—Southern Cotton Oil Co. will rebuild cotton gin reported destroyed by fire; loss about \$10,000.

Hickory, Miss.—People's Gin Co. incorporated with \$4000 capital stock by L. A. Logan, M. N. Buckley, J. A. Brown and others.

Iowa Park, Texas.—Iowa Park Gin Co., recently reported incorporated, has installed cotton gin of 50 bales daily capacity; H. B. Hines, president; R. L. Fowkes, secretary; C. Bird, treasurer.

Johnson, La.—Herring & Starns will rebuild gin and sawmill recently reported burned; operated by Hodges & Starns; daily capacity gin, 10 bales. (See "Lumber-manufacturing Plants.")

Landrum, S. C.—H. K. Finger will not at present install machinery for cotton gin recently mentioned.

Ruth, Miss.—Clark & Price will rebuild plant recently reported burned; will erect building, 20x48 feet, to cost \$300; mill construction; will install gin machinery; capacity of plant 15 bales daily.

Talbotton, Ga.—Talbotton Manufacturing Co., incorporated with \$10,000 capital stock, will establish cotton gin of 30 bales daily capacity; will erect \$800 building, 22x60 feet; mill construction; will install machinery to cost \$2750; bids on machinery now open; E. L. Bordwell, president; R. Leonard, vice-president; J. W. Jordan, secretary and treasurer. (See "Machinery Wanted.")

### COTTONSEED-OIL MILLS

Raymond, Ga.—Leon Edmundson is interested in contemplated establishment of cottonseed-oil mill. (See "Machinery Wanted.")

### ELECTRIC-LIGHT AND POWER PLANTS

Albertville, Ala.—Sand Mountain Electric Co. will begin at once construction of system for lighting city with electricity; will construct three and one-half miles of transmission line; machinery has been ordered. (Previously mentioned.)

Dade City, Fla.—Dade City Light & Power Co. incorporated to furnish light and power, etc.

Erwin, Tenn.—Southern Electric & Power Co. incorporated by W. S. Erwin (cashier Union Bank & Trust Co.), W. T. Tucker, Dr. L. S. Tilson, J. F. Toney and E. N. Harrison, all of Erwin, and S. J. Kirkpatrick, Jonesboro, Tenn., to furnish lights for Erwin, Unaka Springs, Tenn., and United States Fishery, but later it is proposed to increase capital stock and develop water-power owned by Messrs. Toney and Kirk-

patrick. (City of Erwin recently mentioned as considering granting of franchise to supply electric light and power.)

Hawkinsville, Ga.—City will vote November 4 on issuance of \$15,000 of bonds to purchase, operate and maintain electric-lighting system; C. W. Harris, City Clerk.

Hubbard City, Texas.—Union Central Light & Ice Co. has secured necessary franchises and will now construct proposed extension to four surrounding towns, to furnish electric light, power, etc.; \$75,000 of bonds will be issued. (See "Machinery Wanted.")

Jackson, Miss.—Longino & McDowell, 206 Capital National Bank Building, contemplates developing water-power and transmitting electricity; about 2000 horse-power available.

Juliette, Ga.—City is considering issuance of bonds to construct electric-light plant and water-works. Address The Mayor.

Llano, Texas.—Llano Milling & Manufacturing Co., A. J. Zilker, president, has about half completed dam at Llano recently mentioned; power equipment has been purchased.

Millen, Ga.—J. B. McCarry & Co., Atlanta, Ga., have contract to construct lighting plant and water-works at Millen; W. O. Lumpkin will have charge of construction.

Purcellville, Va.—W. Warrington Evans of Evans & Evans, Bond Building, Washington, D. C., purchased Purcellville cannery factory building at \$6000, which he will equip as electrical plant and furnish Purcellville, Round Hill, Hamilton and Bluemont with electricity.

Quitman, Ga.—City will install two new boilers costing \$3477 in power plant. Address The Mayor.

Scottsburg, Va.—Talley's Falls Improvement Co., M. R. Lewis, engineer in charge, is planning development of water-power of Talley's Falls, on Dan river, five miles from Scottsburg; from 10,000 to 12,000 horse-power available for transmission by electricity to manufacturing and lighting plants in Virginia and North Carolina, including copper mining properties in the Virginia-Carolina copper belt. Reports state that \$1,000,000 will be cost of dam, electric plant, transmission lines, etc.

Sparta, Tenn.—O. H. Anderson, J. R. Tubb and others have purchased and will develop water-power properties about one mile from Sparta; dam will be built at once; electric power will be transmitted to Sparta; cost of development about \$25,000.

Spartanburg, S. C.—Electric Manufacturing & Power Co., F. H. Knox, general manager, Pittsburg, Pa., which controls power plant at Gaston Shoals, on Broad river, contemplates building another power plant, which will probably be located either on Broad river or at Nesbitt Shoals, on Tyger river. Referring to this report, the company writes the Manufacturers' Record that it is "not quite ready at the present time to make public our intentions \* \* \* will advise as soon as we have our plans definitely decided upon."

Stevenson, Ala.—City granted franchise to Fred A. Howe, Huntsville, Ala., to construct electric-lighting plant; plans for equipment not fully determined; probably 200 lights; plant to be operated by gasoline engine.

Washington, D. C.—Capital Traction Co. awarded contract for erection of substation at 1st and B streets S. W. to James L. Parsons, Pennsylvania avenue and 13½ street N. W., Washington; estimated cost \$30,000.

Westminster, Md.—Westminster Gaslight Co., Carroll County Electric Light & Power Co., Westminster Water Co. and Citizens' Water & Power Co. have consolidated with \$150,000 capital stock as the Consolidated Utilities Co. of Westminster, Md.; Dr. James H. Billingsden, president; George M. Parke, vice-president; W. Carroll Shunk, secretary-treasurer.

### FLOUR, FEED AND MEAL MILLS

Crowley, La.—Nutriline Milling Co. will increase output to 15 cars of feed daily.

Fairview, N. C.—J. Will Jones has not completed plans for establishment of grist mill and overall factory recently noted; contemplates erection of building of mill construction. (See "Machinery Wanted.")

Calvert, Texas.—Company will probably be organized to establish feed mill and enlarge and increase capacity and output of Calvert Bottling Works.

Graham, Texas.—Graham Mill & Elevator Co. incorporated with \$40,000 capital stock by J. E. Dowdle, J. C. Carmack and J. J. Park.

Manitou, Okla.—Manitou Grain & Elevator Co. incorporated with \$5000 capital stock by J. W. Dickson, R. M. Simons and S. H. Reeves.

#### FOUNDRY AND MACHINE PLANTS

Chattanooga, Tenn.—Electric Machinery and Construction.—Chattanooga Armature Works will be incorporated with \$35,000 capital stock to take over and operate plant of present Chattanooga Armature Works; president of new company, Frank Steffner; S. W. Steffner, secretary and treasurer.

Florence, Ala.—Castings.—Florence Machine Works will enlarge present plant, adding casting foundry; building 40x80 feet will be erected.

Kansas City, Mo.—Brass Foundry.—Pier Brass Manufacturing Co. will erect brass plant to cost \$1000.

Little Rock, Ark.—Implements.—Cotton States Implement & Manufacturing Co. incorporated with \$25,000 capital stock by P. Freeman Hill, James T. Rooker, Frederick S. Williams and E. Eugene Newhouse.

New Orleans, La.—New Orleans Foundry & Iron Co., voted in August as having purchased plant of Schwartz Foundry Co., has organized with \$200,000 capital stock; Louis Kohlmann, president; A. Katz, vice-president; Sigmund Kohlmann, secretary and treasurer; company plans to make improvements to plant.

Phoebe, Va.—Structural Iron.—Sayre Iron Works incorporated with \$50,000 capital stock to manufacture structural iron; S. H. Sayre, president; C. M. Sayre, vice-president, both of Hampton, Va.; C. R. Sayre, secretary-treasurer, Buckroe Beach, Va. (Details of rebuilding burned plant recently noted.)

Richmond, Va.—Safes and Locks.—R. L. Barnes Safe & Lock Co. incorporated with \$200,000 capital stock; R. L. Barnes, president; Robert H. Barnes, vice-president; J. Stuart Hopkins, secretary and treasurer; will continue manufacture of safes and locks.

St. Louis, Mo.—Car Foundry.—American Car & Foundry Co. will, it is reported, erect \$200,000 addition to plant.

#### GAS AND OIL DEVELOPMENTS

Guthrie, Okla.—Cherokee Pipe Line Co. incorporated by W. D. Todd, Warren, Pa.; William Copp, Nowata, Okla.; W. F. Hammett, Tulsa, Okla., and others; reported this company will gather crude oil in Chelsea district for Texas City Refining Co., Texas City, Texas.

Henrietta, Texas.—M. W. Bohan and associates have been granted franchise to furnish Henrietta with gas.

Morgantown, W. Va.—H. N. P. Oil & Gas Co. incorporated with \$10,000 capital stock by H. A. Posten, C. R. Fry, F. H. Huggins and others.

Muskogee, Okla.—Shantz-Crabtree Oil & Gas Co. incorporated with \$3000 capital stock by N. M. Shantz, H. G. Shantz and W. F. Crabtree.

Muskogee, Okla.—New Western Oil & Gas Co. incorporated with \$50,000 capital stock by J. E. Sweat, W. W. Clair, W. C. Uphoff.

Sapulpa, Okla.—Thirteen Oil Co. incorporated with \$10,000 capital stock by R. B. Dingman, J. O. Denton and J. B. Stout.

Sherman, Texas.—City has granted 30-year franchise to Twest & Crawford, Pittsburg, Pa., to furnish Sherman with natural gas.

Tulsa, Okla.—Tulsa Oil & Gas Co. incorporated with \$7500 capital stock by W. C. Waldeck, A. Wiener and G. S. Johnson.

Tulsa, Okla.—Sherman Oil Co. incorporated with \$10,000 capital stock by Claude F. Tingley, Lester Crule and Victor Martin.

#### ICE AND COLD-STORAGE PLANTS

Belington, W. Va.—Belington Ice & Bottling Co., J. A. Vignesney, president, contemplates increasing capital stock \$15,000.

Cedartown, Ga.—Cedartown Ice Co. will quadruple capacity of plant, and has awarded contract to Columbus Iron Works, Columbus, Ga., for complete new absorption system ice-making outfit; B. F. Lowther is president.

Kansas City, Mo.—Kinney Ice & Fuel Co. incorporated with \$25,000 capital stock by George F. Kinney, John J. Dunn and Andrew Hickey.

Lexington, Va.—W. R. Humphris will install additional machinery and increase capacity of plant to 15 tons daily; has awarded contract to De La Vergne Machine Co.,

New York city, for new ice-making machine; will also install 15-horse-power Corliss engine to drive ice machine.

Norman, Okla.—Norman Ice Co. will rebuild plant reported destroyed by fire; loss \$5000.

#### IRON AND STEEL PLANTS

Birmingham, Ala.—Iron Furnace.—Williamson Furnace Co. incorporated with \$25,000 capital stock by B. F. Wilson, Jr., John F. Fletcher and George D. Brittain to operate iron furnace, etc.; will, it is reported, take over plant of Williams Iron Co.

Helena, Ala.—Cotton Ties.—Connors-Weyman Steel Co. incorporated with \$50,000 capital stock by S. F. Weyman, G. W. Connors, W. M. Hoke and J. H. Maxwell to manufacture cotton ties.

#### LUMBER-MANUFACTURING PLANTS

Buhl, Ala.—Buhl Lumber Co. incorporated with \$12,000 capital stock by Manly Cornelius, B. M. Cornelius and others.

Branson, Mo.—Cincinnati Hardwood Lumber Co., Cincinnati, Ohio, has purchased 2280 acres of hardwood and pine timber land, and will establish mills to work the timber; will cut 10,000 feet per day.

Carson, Miss.—Geneva Lumber Co. will make improvements to plant, including installation of new boiler and engine, building of drykiln, pump to be installed and increasing railroad mileage two and one-half miles.

Church Road, Va.—W. H. Hardy & Bro. incorporated with \$25,000 capital stock; W. H. Hardy, president; T. C. Hardy, vice-president; J. H. Hardy, secretary and treasurer.

Collins, Miss.—Silverton Company, New York city, has, it is reported, taken over the property of Williamsburg Lumber Co. at Collins, embracing all the timber holdings, teams and live stock used in connection with the mill; mill plant proper still remains property of Williamsburg Lumber Co., but has been leased for long term of years to Silverton Company. It is proposed to establish several other mills.

Columbia, Tenn.—Riverside Planing Mills, recently reported burned, will be rebuilt; factory 60x80 feet, warehouse 30x100 feet, and boiler and engine room will be erected; two-story building; total floor space 15,000 feet; steam heat; fire plugs and hose to be installed; cyclone dust carrier; cost of buildings and equipment \$12,000; J. B. Borum, secretary and treasurer.

Crossett, Ark.—American Timber Co. contemplates establishment of hardwood lumber mill near Crossett.

Dickson, Tenn.—Dickson Lumber Co. incorporated by John M. Smith, C. L. Faulkner, J. S. Sugg and others.

Fairview, Okla.—C. A. Hinshaw and S. W. Acker are interested in establishment of planing mill.

Farmers, Ky.—Farmers Lumber Co. will rebuild mill reported destroyed by fire; loss several thousand dollars.

Farmers, Ky.—Licking River Lumber Co., F. G. Eberhart, Jr., president (general offices, Ashland, Ky.), will expend \$10,000 to \$12,000 in rebuilding burned plant; will erect frame buildings; further plans not made; R. G. Page, architect and engineer in charge; capacity of plant, 40,000 feet lumber daily.

Fordyce, Ark.—Anthony-Henry Lumber Co. incorporated with \$30,000 capital stock by J. R. Anthony, Garland Anthony, J. T. Henry and others.

Gainesville, Fla.—T. J. Swearingen is now constructing lumber-manufacturing plant recently noted; machinery purchased; daily capacity 30,000 feet dimension lumber and 10,000 feet siding, flooring and ceiling; post-office address Gainesville, R. F. D. No. 4 (formerly Kanapaha).

Hartwell, Ga.—J. H. Bailey will install sawmill. (See "Machinery Wanted.")

Holly, Ark.—A. V. Alexander will, it is reported, establish sawmill near Holly; railroad will be constructed to plant.

Jamestown, Miss.—Austin Lumber Co., Columbia, Miss., will increase capital stock from \$150,000 to \$300,000 and establish plant in Jamestown.

Johnson, La.—Herring & Starna will rebuild sawmill and cotton gin recently reported burned; operated by Hodges & Starna; fireproof building will be erected; machinery to cost \$1000 to be installed; daily capacity of sawmill 5000 to 10,000 feet lumber; E. H. Kubon, engineer in charge. (See "Machinery Wanted.")

Lindsay, Okla.—Lake-Anderson Lumber Co. incorporated with \$12,000 capital stock by F.

J. Houston, W. E. Doty, H. A. Lake and P. B. Anderson.

Mississippi.—Edward Hines Lumber Co., Chicago, Ill., will establish number of sawmills in South Mississippi.

Nashville, Tenn.—Nashville Hardwood Flooring Co. will, it is reported, increase capacity of plant, adding new machinery.

New Orleans, La.—Edwards Lumber Co. incorporated with \$10,000 capital stock; John K. Edwards, president; Ellsha N. Haas, first vice-president; George H. Edwards, second vice-president; Edwin W. Edwards, secretary and treasurer.

New Orleans, La.—Consumers' Manufacturing & Lumber Co. incorporated with \$50,000 capital stock; R. H. Hackney, president; E. L. Silva, vice-president; A. L. Moore, secretary and treasurer.

Sanford, Fla.—Sanford Manufacturing Co. will be name of company recently noted to be organized with capital stock of \$600,000 to establish lumber-manufacturing plant; will cut 80,000 acres timber lands and erect sawmill with daily capacity of 100,000 feet; plans not completed for machinery; present office address, Lakeland, Fla.; all correspondence to be addressed to S. I. Wood, secretary and treasurer, who will superintend construction of plant.

Savannah, Ga.—Bullard & Powell Company incorporated with \$250,000 capital stock and privilege of increasing to \$1,000,000; B. F. Bullard, president; Robert B. Powell, first vice-president; offices, 512 Germania Building; to establish naval-stores plant.

Shreveport, La.—Pearl Land & Lumber Co. incorporated with \$300,000 capital stock; A. N. Ayres, president; Frank J. Looney, vice-president; J. E. Bell, secretary-treasurer.

Shryock, W. Va.—J. C. Moorehead Lumber Co. will rebuild mill reported in August as destroyed by fire; loss about \$30,000.

St. Louis, Mo.—Graham Lumber Co. incorporated with \$100,000 capital stock by J. P. Graham, J. E. Franklin and N. B. Graham, all of Fredericktown, Mo.

St. Louis, Mo.—Frost-Johnson Lumber Co. has increased capital stock from \$1,500,000 to \$10,000,000; will combine Frost-Frigg Lumber Co., St. Louis; Dixie Lumber Co., St. Louis; Union Sawmill Co., Huttig, Ark.; Red River Lumber Co., Frostville, Ark.; DeSoto Land & Lumber Co., Mansfield, La.; Noble Lumber Co., Noble, La.; Black Lake Lumber Co., Compti, La.; Star & Crescent Lumber Co., Montrose, La.; all companies controlled by men associated with Frost-Johnson Lumber Co.; all manufacturing yellow pine. E. A. Frost, Shreveport, La., will be president, and C. D. Johnson, St. Louis, vice-president; E. W. Frost, Texarkana, Texas, and N. W. McLeod, St. Louis, will be directors.

Tennessee.—Tennessee Timber, Coal & Iron Co. incorporated with \$500,000 capital stock; P. G. Bolster, Boston, Mass., president; T. L. Croteau, Portland, Maine, treasurer.

Union, Miss.—R. J. Buckwalter, Wingate, Miss., awarded contract to J. G. McDonough of McDonough Manufacturing Co., Eau Claire, Wis., for erection of sawmill recently noted; steel and concrete; 48x150 feet, with addition 22x75 feet; two stories; daily capacity 60,000 feet, but may soon be increased to 100,000 feet; building will be large enough to accommodate another band mill; equipment is single band, all machinery being furnished by McDonough Manufacturing Co.; about nine miles of standard-gauge railroad will be constructed at cost of about \$50,000.

#### MINING

Aurora, Mo.—Lead and Zinc.—Magnolia Lead & Zinc Co., incorporated with \$300,000 capital stock by Fred Holt, F. B. Wilcox, both of Joplin, Mo., and others, has leased land of United Zinc Co. at Aurora and will develop lead and zinc deposits.

Berkeley Springs, W. Va.—Sand.—N. I. Speer and others are proceeding with plans for development of sand deposits recently noted.

Centerville, Tenn.—Phosphate.—Chickamauga Fertilizer Co. has purchased and will develop phosphate property of Adair & McCarty Bros.

Granby, Mo.—Lead and Zinc.—Little Boss Mining Co. will establish 100-ton lead and zinc mill.

Jacksonville, Texas.—Granite and Marble.—Gould Granite & Marble Co. organized by J. E. Gould, Tyler, Texas, and others.

Joplin, Mo.—Lead and Zinc.—J. Wolley Mining Co. incorporated with \$75,000 capital stock.

Joplin, Mo.—Lead and Zinc.—Co-operative Mining & Milling Co. incorporated with \$50,000 capital stock by G. W. Munson, J. W. Bodyfield and Thomas P. Burns.

Joplin, Mo.—Lead and Zinc.—Kitty Mack Mining Co. incorporated with \$25,000 capital stock by Elliott McGregor, F. D. Sweeney, Thos. J. Sheridan and others.

Kansas City, Mo.—Lead and Zinc.—Okomo Mining & Milling Co. incorporated with \$150,000 capital stock by H. C. Shimp, J. H. Borders, E. C. Chambers and others.

St. Louis, Mo.—Lead and Zinc.—Western Mineral Milling Co. incorporated with \$300,000 capital stock by H. A. Watkins, W. H. Scott, J. C. Pratt and others.

Tennessee.—Iron.—Tennessee Timber, Coal & Iron Co. incorporated with \$500,000 capital stock; P. G. Bolster, Boston, Mass., president; T. L. Croteau, Portland, Maine, treasurer.

Virginia.—Copper.—J. Scott Ferguson, Pittsburg, Pa., will, it is reported, develop copper deposits in Virginia.

Zinc, Ark.—Zinc.—Manhattan Zinc Mining Co., T. R. Cave, Sr., president, recently reported incorporated, will establish plant; plans not formed; contemplates operation by January 1.

#### MISCELLANEOUS CONSTRUCTION WORK

Abram, Texas.—Irrigation System.—Del Monte Irrigation Co., incorporated in July, is planning to construct irrigation system for 1700 acres of land and is inviting bids, plans, etc.; machinery to include the usual pumps, boilers, engines, etc. L. E. Bennett is secretary-treasurer. (See "Machinery Wanted.")

Bartlett, Tenn.—Levees.—Shelby county will construct two levees across Fletcher creek bottom, about two miles from Bartlett; will require about 4000 yards of earth each; bids will be opened October 10; St. George Richardson, County Engineer, Memphis, Tenn. (See "Machinery Wanted.")

Beaumont, Texas.—Wharves.—City will vote on issuance of \$50,000 of bonds for building wharves along river front. Address The Mayor.

Greenville, Miss.—Levee.—R. L. Leonard, Memphis, Tenn., has contract for 160,000 yards of levee work.

Gunnison, Miss.—Levee.—Roach & Stansell, Memphis, Tenn., have contract to construct 45,000 cubic yards of levee work at Gunnison.

Norfolk, Va.—Coal Pier.—Virginian Railway Co.'s contract (intely mentioned) awarded to A. M. Walkup of Richmond, Va., for construction of timber decking for coal pier is a transfer of contract noted some weeks ago; this decking is for Sewells Point steel coal pier previously described. McLenn Contracting Co., Maryland Trust Building, Baltimore, Md., has steel substructure contract; McClintic-Marshall Construction Co., Pittsburg, Pa., has superstructure contract. Mr. Walkup also has contract for constructing engine coaling trestle. He will require from 600,000 to 700,000 feet merchantable long-leaf pine, bolts, washers, etc., and three coaling chutes; exact quantities cannot be stated now. (See "Machinery Wanted.")

Suffolk, Va.—Dredging.—River & Harbor Improvement Co., 501 Mariner and Merchant Building, Philadelphia, Pa., is lowest bidder at 15 and four-tenths cents per cubic yard for dredging 20,000 cubic yards in Nansemond river, about five miles from Suffolk; Major Joseph E. Kuhn is in charge U. S. Engineer's Office, Norfolk, Va.

Vicksburg, Miss.—Levee.—Contract will be let November 3 for construction of about 123,000 cubic yards of levee work on Red river and about 80,000 cubic yards on Mississippi river; Clarke S. Smith, Captain, Engineers. (See "Machinery Wanted.")

#### MISCELLANEOUS ENTERPRISES

Ardmore, Okla.—Hardware.—Paddy-Noble Hardware & Implement Co. organized to consolidate establishments of Noble Bros. and J. C. Paddy; store building will probably be constructed.

Arlington, Texas.—Publishing.—Arlington Printing Co., recently reported incorporated with \$7500 capital stock, has organized with William A. Brown, president; James Dittie, vice-president; John Nichols, secretary and treasurer.

Augusta, Ga.—Grain Elevator.—Nixon Grocery Co. will establish grain elevator. (See "Warehouses.")

Augusta, Ga.—Paper.—Augusta Paper Co. incorporated with \$5000 capital stock and privilege of increasing to \$25,000 by John J. Evans, E. W. Deveney and W. A. Reid.

Baltimore, Md.—Steam Laundry.—George A. Rogers, president Ideal Laundry, 312 West Biddle street, has purchased warehouse at Bayard and Carroll streets; it is



proposed to form consolidation of Ideal, Excelsior and Baltimore laundries; remodel building and equip with laundry machinery; also to erect boiler-house, plans for same by John Freund, Jr., 210 East Lexington street, Baltimore; C. C. Watts, 113 West Hamilton street, Baltimore, contractor.

Baltimore, Md.—Oysters, etc.—Lighthiser Oyster & Sea Food Co. incorporated by Chas. H. Lighthiser, Sr., Chas. H. Lighthiser, Jr., both of Lighthiser Hardware Co., 130 South Hanover street, and Albert M. Sproesser, 17 East Saratoga street.

Baltimore, Md.—Heating and Plumbing.—Frank H. Rudy Company incorporated with \$10,000 capital stock by W. Stuart Symington, Jr., of Yellott & Symington, Calvert Building; Frank H. Rudy of Frank H. Rudy & Co., Calvert Building, and Henry H. Dinneen, 17th and Clifton avenue.

Baltimore, Md.—Printing.—Mules Printing Co. incorporated with \$5000 capital stock by Charles F. Mules, 1820 West Franklin street; David Dempsey, 2025 Wilkens avenue; Howard Hinton, 1832 West Franklin street, and others.

Baltimore, Md.—Chemicals.—Smith Chemical Co. incorporated with \$10,000 capital stock by Thomas D. Roberts, 1417 West Saratoga street; Harry Dehring, 2306 Canton avenue, and Charles MacLellan, 1725 West Franklin street.

Biloxi, Miss.—Laundry.—Acme Laundry Co. will establish steam laundry recently mentioned; H. L. Sinner, officer of company; building to be erected, 45x60 feet; storm sheathing; galvanized-iron siding; composition roofing; cost \$2500; plans by W. T. Harkness, Biloxi; contractor, J. H. Gallo-way, Biloxi; machinery to cost \$8000 will be installed.

Birmingham, Ala.—Land Improvement.—Rhodes-Carroll Company incorporated with \$10,000 capital stock; Charles E. Rice, president; L. C. Leadbetter, vice-president; A. W. Brazelton, secretary and treasurer.

Birmingham, Ala.—Land Improvement.—American Land & Investment Co. incorporated by J. W. Rankin, E. T. Rankin and M. R. Cranston.

Brunswick, Md.—Builders' and Farmers' Supplies.—Roy B. Wenner Company incorporated with \$12,000 capital stock by Walper G. Musgrove, Henry B. Funk, both of Brunswick, and Roy B. Wenner, Cresmont, Pa.

Cleburne, Texas.—Steam Laundry.—W. E. Watts and Henry W. Stringer will, it is reported, establish steam laundry; will erect \$20,000 fireproof building and install suitable machinery.

Corpus Christi, Texas.—Steamship Line.—Corpus Christi Steamship Co. incorporated with \$15,000 capital stock by L. G. Collins, W. G. Blake and A. L. Wright.

Dade City, Fla.—Steam Laundry.—Dade City Light & Power Co. contemplates establishment of steam laundry.

East Leake, Va.—Mineral Water.—East Leake Springs Co. incorporated with \$10,000 capital stock; D. H. Leake, president; L. K. Leake, vice-president; W. A. Leake, secretary and treasurer.

Excelsior Springs, Mo.—Amusements, etc.—Kleinze Realty, Amusement & Water Co. incorporated with \$12,000 capital stock by F. W. Kleinze, Loche Riley, J. T. Samuel and others.

Fort Smith, Ark.—Land Improvement.—Western Arkansas Improvement Co. incorporated with \$10,000 capital stock by A. S. Dowd, Charles B. Eads, H. S. Cutting and others.

Frankfort, Ky.—Machinery.—Frankfort Machine Co., recently reported incorporated, will deal in machinery, automobiles, boats, etc., and repairs; use rented building; president, P. B. Zanone.

Fulton, Mo.—Publishing.—Fulton Gazette Publishing Co. incorporated by Ovid Bell, Emma K. Bell and Frances K. Bell.

Graham, Texas.—Grain Elevator.—Graham Mill & Elevator Co. incorporated with \$40,000 capital stock by J. E. Dowdle and others. (See "Flour, Feed and Meal Mills.")

Greenville, Miss.—Cotton.—Haslip-Hood Cotton Co. incorporated with \$50,000 capital stock by T. H. Hood, J. B. Watts, both of Greenville, and J. K. Haslip, Mayersville, Miss.

Hollister, Okla.—Townsite.—Hollister Townsite Co. incorporated with \$12,000 capital stock by W. A. Stinson, John H. Mounts and H. E. Fisher.

Jacksonville, Fla.—Land Improvement.—Riverside Improvement Co. incorporated with \$50,000 capital stock; T. T. Welch, president and treasurer; W. P. Smith, secretary.

Jacksonville, Fla.—Lumber.—E. G. Phinney Company incorporated with \$100,000 capital

stock; E. G. Phinney, president; Thomas M. Keller, vice-president; Thomas C. Milan, treasurer; C. J. Angel, secretary.

Jennings, La.—Land Development, etc.—Mesquite Plantation Co. incorporated with \$115,000 capital stock; will deal in and operate farms and canals, etc.; organized to take over property already developed and improved; has large plantation near Jennings; S. L. Cary, president; Joseph Sturdivant, vice-president; Phillip Miller, secretary; M. A. Stanton, treasurer.

Kansas City, Mo.—Stockyards.—Kansas City Stockyards Co. of Missouri will, it is reported, expend about \$500,000 in improvements, including erection of cattle pens and horse and mule barns.

Lavon, Texas.—Brown, Cade & Co. incorporated with \$10,000 capital stock by R. L. Brown, E. B. Brown, L. Cade and Ford Scale.

Lutherville, Md.—Land Development.—Charles W. Gallagher, 1805 Division street, Baltimore, Md., has purchased 10 acres of land at Lutherville, and will develop same; lots will be laid off, landscape and grading effects planned and dwellings erected.

Macon, Ga.—Contracting, etc.—Ben L. Jones, 611 3d street, Macon, Ga., contemplates organization of real estate and contracting company with \$150,000 capital stock. Mr. Jones now has under construction 10 six-room houses in suburbs, and is building clubhouse, tenant's dwelling, etc., about 13 miles from city; will install passenger and freight elevator in clubhouse; buildings previously noted. (See "Machinery Wanted.")

Manitou, Okla.—Grain Elevator.—Manitou Grain & Elevator Co. incorporated by J. W. Dickson and others. (See "Flour, Feed and Meal Mills.")

New Orleans, La.—Hog and Poultry Raising, etc.—Southern Hog & Poultry Co., D. J. Theard, president, 404 Poydras street, contemplates securing option on several thousand acres of land near New Orleans, reserving about 300 acres for central farm and selling balance to poultry and hog raisers and truck gardeners; also contemplates operating as agents for co-operative farmers. (In August noted incorporated with \$100,000 capital stock.)

New Orleans, La.—Laundry.—People's Co-operative Laundry Co., 919 Malson Blanche Building, recently reported incorporated, will establish laundry; will erect two-story fireproof building, about 90x200 feet, at cost of \$20,000; cost of machinery \$5000; will receive bids on machinery until October 25; architect not selected; John L. Lenfant, president; Manuel Cerda, vice-president; John H. Herman, Jr., treasurer; James S. Philpot, secretary. (See "Machinery Wanted.")

Norfolk, Va.—Printing.—W. Thompson Barron will erect buildings and equip for printing plant.

Norfolk, Va.—Contracting.—Southern Public Service Corporation incorporated with \$100,000 capital stock; W. H. Fritchman, president; E. F. Kilton, secretary and treasurer; P. S. Stephenson, vice-president; to contract for erection of gas-works, water-works, etc.

Oklahoma City, Okla.—Printing.—Francis Typesetting Co. incorporated with \$35,000 capital stock by Herbert Francis, P. L. Clinton, A. C. Jackson and others.

Oxford, N. C.—Lithia Water, etc.—Smith Lithia Water Co. incorporated with \$50,000 capital stock by Mrs. M. T. Smith, R. T. Smith, W. B. Shaw and others to develop mineral springs, build hotels, sanitariums, etc.

San Antonio, Texas.—Suburban Development.—Highland Development Co., organized by Charles Peterson, L. P. Peck and B. M. Hammond, will improve and develop 640 acres of land owned by the company as residential section.

St. Louis, Mo.—Grain Elevator.—Burlington Grain Elevator Co. incorporated with \$50,000 capital stock by S. J. Adams, J. G. Matthews and E. J. Mudd.

St. Louis, Mo.—Grain Elevator.—Burlington Grain Elevator Co. incorporated with \$50,000 capital stock by S. J. Adams, J. G. Matthews and E. J. Mudd.

Williamson, W. Va.—Land Improvement.—Ridgeway Land Co. incorporated with \$25,000 capital stock by Hubert Quesenbury, Harry Scherr, John A. Sheppard and others.

#### MISCELLANEOUS MANUFACTURING PLANTS

Ablene, Texas.—Candy.—Calhoun Candy & Manufacturing Co. organized with \$30,000 capital stock; W. P. Calhoun, president; J. C. Taylor, secretary; Geo. L. Paxton, treasurer; will manufacture candies, etc.

Alexandria, La.—Sugar Refinery.—Alexandria Progressive League, M. L. Alexander,

secretary, contemplates organization of company with \$200,000 capital stock to establish central sugar refinery; correspondence with interested parties desired.

Allendale, S. C.—Novelties.—Southern Art & Novelty Co. incorporated with \$3000 capital stock by Fred S. Davis and William Fleming, both of Pineland, S. C.

Atlanta, Ga.—Furniture.—New Ware Furniture Co. incorporated with \$100,000 capital stock by Hugh T. Inman, W. F. Winecoff and Z. P. Dean.

Austin, Texas.—Creamery.—Florence Creamery Co. incorporated with \$5000 capital stock by H. M. Bennett, W. H. Bennett and G. E. Adams.

Baltimore, Md.—Distillery.—D. L. Arey Distilling Co., Salisbury, N. C., will establish distillery in Baltimore; leased building at 21 and 23 East Pratt street, with floor space of 20,000 square feet; will install new machinery and make improvements in building.

Calvert, Texas.—Bottling.—Company will probably be organized to enlarge and increase capacity and output of Calvert Bottling Works; also to establish feed mill.

Baltimore, Md.—Betting.—Gandy Betting Co., W. Kennedy Cromwell, president, 728-740 West Pratt street, let contract to McLaughlin Bros., 915 Holton street and 100 East Lexington street, Baltimore, for erection of addition to factory.

Baltimore, Md.—Paper Products.—Paper Products Co. has had plans prepared by Paul Emmart, 210 West Fayette street, Baltimore, for factory building on Franklin street and Pennsylvania road; 75x100 feet; one story; brick; steam heat; cost \$3500.

Baltimore, Md.—Bank and Store Fixtures, etc.—F. X. Ganter Company incorporated with \$300,000 capital stock by Francis X. Ganter, president Crystal Showcase & Mirror Co., Leadenhall and Stockholm streets; Charles W. Ganter, treasurer Crystal Showcase & Mirror Co., Leadenhall and Stockholm streets, and Henry A. Ulrich, Builders' Exchange Building.

Baltimore, Md.—Mirror Amalgam, etc.—International Mirror Amalgam & Machine Co. incorporated with \$25,000 capital stock by John Chaudron, Cabell Y. Peyton, both of Chaudron & Peyton, 421-423 East Saratoga street, and John H. Elliott, 347 North Charles street.

Baltimore, Md.—English Manufacturing Co. incorporated with \$10,000 capital stock by Lorenzo R. English, 1904 West Lanvale street; E. John Nichols and I. Harvey Nichols, both of Baltimore Antiseptic Steam Laundry Co., 1533 Myrtle avenue.

Birmingham, Ala.—Drugs.—Fulton Bros. Drug Co. incorporated with \$10,000 capital stock by David Fulton, T. R. Fulton and J. R. Stevenson.

Charleston, S. C.—Paper Boxes.—Charleston Paper Box Manufacturing Co. incorporated with \$15,000 capital stock; Wm. S. Lanueau, president; E. Harry Schirmer, vice-president.

Columbus, Ga.—Gas Plant.—Columbus Gas-light Co. will improve plant, installing booster and exhauster.

Columbus, Ga.—Fertilizer.—W. C. Bradley Company, W. C. Bradley, president, recently noted to purchase and operate plant of Georgia Fertilizer Co., will need no further equipment; all machinery installed; plant ready for operation; capacity, 200 tons daily; M. K. Bryan, superintendent.

Dallas, Texas.—Horsecollars.—J. M. Couch, Atlanta, Ga., proposes establishment of horsecollar factory in Dallas.

Durham, N. C.—Tobacco.—Khedival Tobacco Co. incorporated with \$25,000 capital stock by W. C. Walker, Monteth Giltin, both of New York city, and others. (Recently noted to establish tobacco factory.)

Enid, Okla.—Shirts.—Warden-Johnson Shirt Co. incorporated with \$10,000 capital stock by M. S. Johnson, F. H. Hanson and W. A. Nelson.

Fairview, N. C.—Overalls.—J. Will Jones will establish overall factory recently mentioned; plans not completed. (See "Flour, Feed and Meal Mills" and "Machinery Wanted.")

Fort Payne, Ala.—Lime.—C. G. Green, Cincinnati, Ohio, has purchased and will operate plant of Standard Lime Co. in Fort Payne.

Frederick, Md.—Shutter and Blind Fasteners, etc.—Frederick Blind Fastener Co. incorporated with \$5000 capital stock by S. Elmer Brown, James A. Brown and George E. Wilcoxson.

Gadsden, Ala.—Marble and Stone.—Southern Marble & Stone Co., organized by H. A. Fleming, Canton, Ga., and others, will establish marble plant in Gadsden; will erect suitable building 30x50 feet.

Hagerstown, Md.—Explosive.—Broad Top Smokeless Explosive Co. incorporated with \$20,000 capital stock to manufacture gasless and smokeless explosive.

Hillsboro, Texas.—Mail-handling Devices.—Pepple Safety Mail Exchange Co. incorporated with \$5000 capital stock by J. W. Pepple, Thomas Ivy, B. I. Chambers and others to manufacture patented safety mail catcher and discharger.

Hattiesburg, Miss.—Syrup.—Company is being organized by T. S. Jackson and others to establish syrup factory. (See "Canning and Packing Plants.")

Houston, Texas.—Trunks, etc.—Freyer Trunk Manufacturing Co., L. A. Freyer, president and general manager, 210 Crawford street, will expend \$7500 in erection of factory building recently mentioned; plans by W. L. Strickland; three-story structure; 50x100 feet; 50x100 feet for mill yard; will install machinery; electrical power. (See "Machinery Wanted.")

Johnston, S. C.—Pulp Mill.—A. J. Mobley is interested in contemplated establishment of pulp mill. (See "Machinery Wanted.")

Kansas City, Mo.—Scales and Supplies.—Kansas City Scale & Supply Co. incorporated with \$50,000 capital stock by D. B. Blankenship, F. M. Cockrell, H. L. Sherwood and others.

Kansas City, Mo.—Gas Heaters and Burners.—Bauer Gas Burner & Heater Manufacturing Co. incorporated with \$3000 capital stock by August F. Bauer, John Tarpey and Percy A. Budd.

Kansas City, Mo.—Umbrellas.—Kansas City Umbrella Manufacturing Co. incorporated with \$3000 capital stock by William R. Sober, Raymond N. Eaton and Bertie L. Pease.

Nederland, Texas.—Rice Mill.—Jefferson County Rice, Land & Milling Co., recently reported incorporated with \$100,000 capital stock by Alfred Baker, E. Rockhill and D. W. Glascock, has taken over Nederland Rice Milling Co. and will remodel plant and equip with new machinery; capacity to be 600 bags every 12 hours.

Portsmouth, Va.—Gas Plant.—Portsmouth Gas Co. will, it is reported, double its lighting capacity and new machine will be installed for generating gas by use of oil and steam; two of present structures will be rebuilt and additions will be made; cost of improvements about \$5000; company contemplates extending lines beyond city limits.

Pulaski, Tenn.—Bottling.—Nashville Bottling Works, Nashville, Tenn., will, it is reported, establish bottling plant at Pulaski.

Richmond, Va.—P. C. Abbott & Co. incorporated with \$30,000 capital stock; P. C. Abbott, president; C. W. Abbott, secretary and treasurer.

Savannah, Ga.—Bottling.—Pepsi-Cola Bottling Co., 11 Bay street west, recently reported incorporated, has purchased all machinery and will operate plant of 2000 dozens bottles per day capacity; J. D. Farrior, president; C. D. Bradham, vice-president; J. H. Parker, secretary-treasurer.

Stephensburg, Ky.—Sassafras Plant.—Lake Essential Oil Co. incorporated by Essential Oil Co., Louisville, Ky., to establish sassafras plant at Stephensburg.

St. Louis, Mo.—Emil Baumann Manufacturing Co. incorporated with \$25,000 capital stock by Emil Baumann, Adolph Baumann and Edward Seib.

St. Louis, Mo.—Globes.—Marquette Globe Co. incorporated with \$5000 capital stock by S. J. Harbaugh, J. A. DeVillias and Henry F. Droste.

St. Louis, Mo.—Envelope Fasteners.—Security Envelope Fastener Co. incorporated with \$15,000 capital stock by Amedeo J. Michel, John McD. Jones and Eugene L. Isaacs.

Temple, Texas.—Creamery.—Company has been organized with \$5000 capital stock by W. M. Dickey and J. R. Spencer to establish creamery; building will be erected and machinery installed.

Washington, D. C.—Cartridges and Firearms.—Liberty Cartridge Co. incorporated with \$500,000 capital stock; E. M. Funk, president; Miles Taylor, secretary and treasurer; to manufacture cartridges and firearms.

Weston, W. Va.—Bostow Manufacturing Co., incorporated with \$75,000 capital stock by Thomas Bostow, George I. Keener and others.

West Palm Beach, Fla.—Cigars.—J. A. Mendel proposes establishment of cigar factory.

Winchester, Ky.—Creamery.—Winchester Creamery Co. incorporated with \$6000 capital stock.

Winston-Salem, N. C.—Drugs.—Fairview Drug Co. incorporated with \$10,000 capital

stock by W. O. Little, W. M. Taylor, Jr., and Louis Moses.

### RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

El Dorado, Ark.—Chicago, Rock Island & Pacific Railway, J. B. Berry, chief engineer, Chicago, Ill., will construct terminal facilities at El Dorado, expending about \$40,000; work will include 11-stall frame roundhouse, 64-foot steel turntable, 130-foot circular pit, 115,000-gallon steel standpipe and 40-foot, 100-ton track scales. George B. Swift & Co., 185 East Madison street, Chicago, Ill., are contractors.

New Orleans, La.—New Orleans Railway & Light Co., 317 Baronne street, will award contract October 12 for erection of steel building adjacent and connected with repair shop; details furnished at office of company; bids to be addressed to Hugh McCloskey, president.

Washington, D. C.—Bids will be received at office of Commissioners District of Columbia (H. B. F. Macfarland, Henry L. West and Jay J. Morrow) until October 16 for foundations, concrete piles and masonry work for Union Station plaza improvements. Forms of proposals, specifications, drawings and necessary information may be obtained from chief clerk, Engineer Department, Room 427 District Building, Washington. Drawings may be obtained from same source on deposit of \$10. D. H. Burnham & Co., Chicago, Ill., prepared plans. Congress appropriated \$100,000 and Washington Terminal Co. contemplates additional expenditure of \$50,000. (Recently mentioned. See "Machinery Wanted.")

### ROAD AND STREET IMPROVEMENTS

Bluefield, W. Va.—Luck Construction Co., Roanoke, Va., has begun work on proposed seven miles of macadam road to be constructed from Blackfoot to Elk Garden, for which it has secured contract at \$32,400. W. A. Gardner is superintendent of construction.

Chattanooga, Tenn.—Board of Public Works, H. F. Van Dusen, chairman, opened bids October 6 for asphalt resurfacing and vitrified-brick paving on Broad street, between 6th and 9th streets. (See "Machinery Wanted.")

Chattanooga, Tenn.—City will pave portion of McCalle avenue with either sheet asphalt, bitulithic or bituminous macadam, and another portion with vitrified brick; bids will be opened October 13; H. F. Van Dusen, chairman Board of Public Works. (See "Machinery Wanted.")

Follansbee, W. Va.—City has voted \$5000 of bonds to pave Main street. Address The Mayor.

Fort Worth, Texas.—City contemplates additional street-paving work during coming year, including paving of Pennsylvania avenue from Adams street to Jennings avenue, contract for which may be awarded to Texas Bitulithic Co. of Fort Worth. Work to be done by city paving plant includes South Main street, 40,000 yards; Jennings avenue, 25,000; Hemphill, 25,000; First, Eleventh, Twelfth and Thirteenth, 4000; El Paso, 3000; Magnolia, 3000; side streets and crossings, 100,000. Address The Mayor.

Gulfport, Miss.—Harrison county will vote November 3 on issuance of \$50,000 of bonds for building roads and bridges. Address County Commissioners.

Houston, Texas.—Harris county will pave four miles of Cedar Bayou road, three-quarter mile of Rudlin road and half mile of Lynchburg and Crosby road; bids will be opened October 15; John B. Ashe, County Auditor. (See "Machinery Wanted.")

Jackson, Miss.—City is planning paving of main business streets. Address The Mayor.

Jacksonville, Fla.—City contemplates additional paving, sidewalk work, laying of mains, sewers, etc., during 1909; William H. Sebring, Mayor.

Jacksonville, Fla.—City will pave Walnut street with vitrified brick. Address The Mayor.

Lexington, Ky.—City will pave South Ashland avenue with brick, bitulithic, macadam, wooden block or asphalt; bids will be opened October 24; John Skain, Mayor. (See "Machinery Wanted.")

Little Rock, Ark.—L. P. Shelby, Little Rock, has contract at \$59,519 for paving about two miles in West 3d Street Improvement District with brick; Emmett Morris, secretary of Commissioners for district; E. A. Kingsley, City Engineer. (Recently mentioned.)

Mooresville, N. C.—City has voted \$25,000 of bonds for street improvements and water-

works construction. Address The Mayor. (Recently mentioned.)

Newport News, Va.—City will grade, curb and pave streets; bids will be opened November 2, and are to be submitted on both granite and concrete curb and gutter and sheet asphalt, bitulithic, block asphalt, vitrified brick, granitoid concrete-block pavement and macadam; sand and concrete foundations; Geo C. Via, chairman committee on highways and sewers. (See "Machinery Wanted.")

Rockville, Md.—John McAtee, Clearfield, Pa., has contract for construction of pike from Potomac to Conduit road, distance of four and one-half miles, at \$19,153.

St. Louis, Mo.—Board of Public Improvements, W. B. Dryden, secretary, has drafted ordinances for paving of 24 streets, including Daggett avenue, Knapp street, Cadet avenue, Ohio avenue, North Market street and other streets; brick, bitulithic asphalt and granite to be used.

Union Springs, Ala.—Bullock county will vote November 3 on issuance of bonds for road improvements. Address County Commissioners.

Washington, D. C.—Arthur Cowell, Hilbs Building, Washington, D. C., has contract at \$350 for concrete walk, brick wall, drains, iron fence, grading, etc., at parade grounds, marine barracks.

### SEWER CONSTRUCTION

Altamare, N. C.—City will construct sewer system; C. M. Miller, Salisbury, N. C., is making surveys.

Florence, Ala.—City will open bids October 19 for construction of two separate extensions of sanitary-sewer system; J. B. White, City Clerk; A. E. Walker, Mayor. (See "Machinery Wanted.")

Jacksonville, Fla.—City contemplates laying additional sewers, etc., during 1909; William H. Sebring, Mayor. (See "Road and Street Improvements.")

Lexington, Ky.—City will vote November 3 on issuance of \$25,000 of bonds to extend and continue construction of main system of sewerage, referred to at various times; John Skain, Mayor; J. E. Cassidy, City Clerk.

Longview, Texas.—City has granted 50-year franchise to James M. Walker and E. M. Thomas of Ennis (Texas) Sewerage Co. for construction of sewer system with disposal plant; about 18 miles long; estimated cost \$25,000. (Recently mentioned.)

Louisville, Ky.—City will open bids October 16 for construction of Breckinridge-street sewer, contract No. 13, and October 21 for construction of sewer known as section "E," southern outfall sewer, contract No. 14; former work consists mainly of building concrete sewer as follows: 1223 feet 54 inches in diameter; 480 feet 51 inches in diameter; 484 feet 45 inches in diameter; later consists of building plain and reinforced-concrete sewer as follows: 1965 feet 12-foot 3-inch section; 1510 feet 12-foot section; J. B. F. Braed, chief engineer; P. L. Atherton, chairman Sewerage Commissioners, Equitable Building. (See "Machinery Wanted.")

San Antonio, Texas.—Prospect Hill Sewer Committee has adopted plans and specifications by J. E. Van Riper, assistant City Engineer, for sewer system, for which \$45,000 of bonds were recently reported voted.

Washington, D. C.—Warren F. Brenizer Company received contract to reconstruct portions of sewer recently mentioned; cost \$15,000.

Winston-Salem, N. C.—City awarded contract to Crawford Plumbing & Mill Supply Co. of Winston-Salem at \$11,430 to lay about three miles of sanitary sewer pipes; J. N. Ambler, City Engineer. (Recently mentioned.)

### TELEPHONE SYSTEMS

Avis, Ky.—Avis Telephone Co. incorporated by J. C. Halt, Alonzo Harris and William Blair.

Cameron, S. C.—Cameron Telephone Co. incorporated with James M. Moss, president; Harvey L. Taylor, secretary and treasurer; to install telephone system in Cameron.

Camp Knox, Ky.—Camp Knox & Middleton Telephone Co. incorporated by T. J. Mercer, J. J. Booker and Albert Mercer.

El Dorado, Okla.—El Dorado Telephone Co. incorporated with \$50,000 capital stock by W. P. Ritchie, P. V. Blain, Bama Arrant and others.

Godley, Texas.—Godley Independent Telephone Co., recently reported incorporated, will establish telephone system; B. B. Robison, president; C. D. Odum, secretary. (See "Machinery Wanted.")

Howe, Texas.—Howe Telephone Co. incorporated by C. A. Shock, S. D. Donoho and R. S. Dougherty.

New Orleans, La.—Cumberland Telephone & Telegraph Co., New Orleans, is planning extensions and improvements to system in Louisiana, including construction of 300 miles of poles and several thousand miles of wire; B. S. Read, district superintendent.

Nunez, Ga.—Mutual Telegraph & Telephone Co. incorporated with \$3000 capital stock.

Pine Grove, W. Va.—Enterprise Telephone Co. has applied for 50-year franchise to operate telephone system in Pine Grove.

Spartanburg, S. C.—Carolina, Clinchfield & Ohio Railroad, M. J. Caples, chief engineer, Johnson City, Tenn., will install metallic wire telephone system between Spartanburg and Bostick, N. C.; exclusively for railroad use during construction.

### TEXTILE MILLS

Calhoun Falls, S. C.—Print Cloth, Calhoun Mills, previously reported, has purchased and is installing 16,384 spindles, 400 looms, 1600-horse-power steam plant, etc., for manufacturing print cloth; mill will be arranged to operate either by steam or electricity. Company will next year add 10,000 spindles and 300 looms, erecting a weave shed for the looms; E. M. Lander, secretary, Williamston, S. C., where correspondence should be addressed until further notice.

Erwin, Tenn.—Cotton Goods, Southern Electric & Power Co. is considering proposition for location of cotton mill.

Fitzgerald, Ga.—Yarns.—Fitzgerald Cotton Mills will, it is reported, install looms for plain weaving; now has 10,000 ring spindles, etc.

Portsmouth, Va.—Hosiery.—Parker Hosiery Mill and Dye Works has awarded contracts, as lately reported, for new buildings; main structure 60x160 feet, with dye-house 40x110 feet, two stories high, of brick; plans by R. C. Bibberstein, Charlotte, N. C., and construction by Edward Overman, Portsmouth; new plant to cost from \$20,000 to \$50,000 and be operated by electricity. Parker company will operate 300 knitting machines, with daily capacity of from 300 to 1000 dozen pairs, in new plant.

Reedy River Factory, S. C.—Sheetings, etc. Reedy River Manufacturing Co. will hold meeting on October 27 at office of E. A. Smyth, Greenville, S. C., to consider increasing capital stock from \$200,175 to \$400,175; present equipment, 12,000 spindles and 371 looms.

Rockwood, Tenn.—Hosiery.—Rockwood Mills will add a few knitting machines.

### WATER-WORKS

Baltimore, Md.—Fire Board, Edward M. Parrish, president, City Hall, has endorsed plans submitted by Daniel B. Banks, consulting engineer, Maryland Savings Bank Building, for erection of pumping station in Centre Market Space in connection with \$500,000 high-pressure pipe-line system in business district recently mentioned. Plans call for one-story building, of fireproof construction, with frontage of 44 feet and depth of 200 feet; 40-foot driveways will be constructed on each side of building, where pumps will be installed to force water through the pipe-line laterals, so that a pressure of 200 to 300 pounds per square inch will be obtainable at nozzles; structure is estimated to cost between \$90,000 and \$100,000, allowing about \$400,000 for installation of pumps, laying of mains and placing of flush hydrants.

Bedford City, Va.—Jeter Hill Water Co. incorporated with \$5000 capital stock; C. P. Parker, president; A. M. Rittenough, vice-president; D. E. Parker, secretary-treasurer.

Clarksburg, W. Va.—West End Water Co. incorporated with \$20,000 capital stock by O. B. Lawman, F. I. Day, D. H. Taylor and others to construct water-works system.

Coweta, Okla.—City has contracted with W. C. Swanson, Joplin, Mo., for construction of water-works system, subject to result of bond election that will soon be held.

Erwin, Tenn.—City is constructing half-mile of eight-inch mains to connect with pipe already laid; gravity system; A. R. Brown, contractor.

Fort Worth, Texas.—Layne & Bowler Company, Houston, Texas, contemplates establishing artesian water plant at Fort Worth.

Hobart, Okla.—Kirby, Mayfield & Shaw, Lawton, Okla., have contract to extend water-works system.

Kansas City, Mo.—Board of Fire and Water Commissioners has approved plans prepared by Wynkoop Kierstedt, consulting engineer, for additional settling basins at Quindaro water-works station; basins will have capacity of 50,000,000 gallons, and will

cover area 600x450 feet; present capacity of station, 40,000,000 gallons; bids to be invited on two kinds of construction—perpendicular reinforced-concrete wall and slope wall; estimated cost, \$175,000; work will be in charge of William G. Goodwin, chief engineer. (Noted in July.)

Juliette, Ga.—City contemplates issuing bonds for construction of water-works and electric-light plant. Address The Mayor.

Millen, Ga.—J. B. McCrary & Co., Atlanta, Ga., have contract to construct water-works and lighting plant at Millen. W. O. Lumpkin will have charge of construction.

Mooresville, N. C.—City has voted \$25,000 of bonds for construction of water-works and improvement of streets. Address The Mayor. (Recently mentioned.)

Parkersburg, W. Va.—Water-works Commission, S. D. Camden, president, Union Trust Building, will award contract October 12 for drilling test and observation wells. (See "Machinery Wanted.")

Richmond, Va.—Contract will be let October 14 for furnishing and erecting machinery and apparatus for electric pumping plant, including four centrifugal pumps, each of 4,000,000 gallons capacity per day, and four 200-horse-power electric motors, with necessary switchboard, wiring, pipes and water meters; estimated cost of machinery \$17,000; plans by E. W. Trafford of Richmond, consulting engineer; Charles E. Bolling, City Engineer; E. E. Davis, superintendent of water-works, Room 3, City Hall. (Recently noted under "Electric-Light and Power Plants." See "Machinery Wanted.")

Sherman, Texas.—City invites bids until October 19 for boring two eight-inch wells, from 750 to 850 feet deep, in connection with construction of water-works system, for which \$14,000 of bonds were recently reported voted; C. E. Craycroft, Mayor; P. C. Thurmond, City Engineer. (See "Machinery Wanted.")

Temple, Texas.—Water Commissioners have adopted plans for improvement of municipal water-works; propose to build brick pumping station, construct new reservoir with cemented walls and compartments equipped with settling basins and filtration beds, extend mains and replace supply line from Leon river to city reservoir with larger pipe; site for new reservoir comprises about four city blocks, lately purchased; expenditure estimated, \$40,000 to \$50,000. (N. N. Rushdell, Dallas, Texas, previously mentioned as architect.)

Washington, D. C.—W. F. Macfarland, Commissioner District of Columbia, recommends special appropriation of \$314,000 for extension and enlargement of water mains. Itemized cost of work follows: 30-inch main from Kentucky and Potomac avenues to Twining City, \$42,000; 20-inch main from Twining City to Congress Heights, \$67,000; 20-inch main from Twining City to Benning, \$70,000; 20-inch main from Reno reservoir to Pinehurst, \$53,000; 36-inch main from pumping station to Brookland, D. C., \$74,000; 12-inch main to extend fire protection to Reform School, \$8000.

Westminster, Md.—Consolidated Utilities Co. of Westminster, Md., has been organized with \$150,000 capital stock by consolidation of Westminster Gaslight Co., Carroll County Electric Light & Power Co., Westminster Water Co. and Citizens' Water & Power Co. Dr. James H. Billingslea is president; Geo. M. Parke, vice-president; W. Carroll Shunk, secretary-treasurer.

### WOODWORKING PLANTS

Birmingham, Ala.—Perfection Mattress Co., F. M. Jackson, president, will install excelsior-manufacturing plant. (See "Machinery Wanted.")

Gadsden, Ala.—Heading Mill.—Judge Crowley and others of Fort Payne, Ala., are contemplating, it is reported, establishment of heading factory at Gadsden.

Huntsville, Ala.—Hoops and Heading.—G. W. Holland & Co., Decatur, Ala., has purchased, will improve, remodel and operate plant of Huntsville Hoop & Heading Co., Huntsville.

Jackson, Tenn.—Furniture and Fixtures.—Buddle-Lindsey Manufacturing Co. has increased capital stock from \$30,000 to \$50,000.

Macon, Ga.—Furniture.—Muecke & Sons Company will erect shop building in addition to present plant.

Meridian, Miss.—Staves.—Wymond Stave Co., branch of Samuel Wymond Cooperage Co., Aurora, Ind., is establishing stave factory recently mentioned; machinery purchased; will manufacture heading and 20,000 staves daily; S. L. Dunigan, manager.

Paris, Texas.—Boxes.—Paris Box & Manufacturing Co. organized with \$25,000 capital



stock to establish factory recently noted. (See "Machinery Wanted.")

Suffolk, Va.—Barrels, Crates, etc.—Nansemond Truck Package Co. incorporated with \$50,000 capital stock; A. B. Minor, president and general manager; E. M. C. Quimby, secretary and treasurer; J. T. Cross, superintendent; to continue established plant; will expend about \$10,000 in improvements.

### BURNED

Bishopville, S. C.—E. S. Tinsdale's cotton gin.

Brooksville, Fla.—Muller's sawmill; loss about \$10,000.

Cambridge, Md.—Smith & Lecompte's Standard Steam Laundry; loss about \$1200.

Cartersville, Ga.—Southern Cotton Oil Co.'s cotton gin; loss about \$10,000.

Cary, N. C.—F. R. Gray's cotton gin.

Clarksburg, W. Va.—Home Hotel, owned by A. F. Law, loss \$20,000 to \$25,000; building owned by Mrs. Ashby Monroe and occupied by Clarksburg Supply Co., loss \$15,000.

Columbia, S. C.—A. J. Roberts' cotton gin; loss about \$2000.

Crawford, Miss.—Waller, Carr & Co.'s cotton gin; loss about \$8000.

Crowley, La.—American Rice Milling Co.'s plant; loss between \$70,000 and \$80,000.

Dorchester, Va.—Colonial Coal & Coke Co.'s commissary store and other buildings; loss about \$30,000.

Fincastle, Texas.—J. I. Tidwell's cotton gin; loss about \$3500.

Farmers, Ky.—Farmers' Lumber Co.'s mill; loss several thousand dollars.

Fort Worth, Texas.—Walker Grain Elevator Co.'s buildings; loss \$10,000.

Halwood (not a postoffice), Fla.—Sawmill owned by Halsema-Woodcock Construction Co., Jacksonville, Fla.

Houston, Texas.—H. H. Dooly, Jr.'s ice-cream factory; loss about \$6000.

Jackson, Miss.—Morrison Block, occupied by Capital Grocery Co. and owned by Morrison Bros.

Kinder, La.—J. J. Kingrey's store building; loss about \$8000.

Lumber City, Ga.—J. F. Darby's sawmill, shingle and lath mill; loss about \$4000.

Madison, Texas.—A. A. Allen's cotton gin; loss about \$5000.

Montes, W. Va.—Brown & Hill's lumber mill; loss \$50,000.

Norman, Okla.—Norman Ice & Coal Co.'s plant; loss \$10,000.

Pendergrass, Ga.—P. J. Roberts' hotel.

Plumtree, N. C.—Lees-McRae School's dormitory.

Richmond, Ky.—St. Charles Hotel.

Selma, Ala.—R. H. Jones' gin and sawmill; estimated loss \$2400.

St. Louis, Mo.—Campbell Glass & Paint Co.'s warehouses; loss about \$150,000.

Tampa, Fla.—Bryan & Lightsey's store building; loss \$10,000.

Vienna, Ga.—J. B. Farehand's stable; loss about \$3000.

### BUILDING NOTES

#### APARTMENT-HOUSES

Atlanta, Ga.—Carl Witt will erect apartment-house, three stories; frontage 50 feet; two stories on ground floor; two apartments on each of upper floors; pressed brick; gas and electric lighting; steam heat; hot and cold water; cost about \$25,000; contract awarded to Moise De Leon of Atlanta; construction has begun.

Baltimore, Md.—C. Lawson Pierson, president Engineering-Contracting Co., 207 American Building, purchased residence at St. Paul and Franklin streets and will convert same into apartment-house; when reconstruction is effected cost will represent about \$20,000.

Baltimore, Md.—H. H. Brown will not erect apartment-house at 85 Park avenue. (Recently incorrectly noted.)

Birmingham, Ala.—Cullom Apartments Co. incorporated with \$100,000 capital stock; E. N. Cullom, president; C. C. Adams, vice-president; N. W. Trimble, director.

Lynchburg, Va.—C. H. & A. L. Bensley will erect apartment-house, for which Aubrey Chesterman, Lynchburg, was recently noted to prepare plans; six-story structure; 48x127 feet; brick and terra-cotta; ordinary construction; low-pressure steam heat; electric elevators; date of opening bids not settled.

Macon, Ga.—Ben L. Jones will erect apartment-house; four stories; brick; contain about 40 rooms.

Nashville, Tenn.—William Gupton will erect brick apartment-house to cost \$4200.

Richmond, Va.—Eugene Broadus will erect brick apartment-house, six dwellings, to cost \$28,400; also brick apartment-house, two dwellings, costing \$8800.

San Antonio, Texas.—S. Pressa Development Co. awarded contract to Baxter-Grandfield Construction Co., Arlington court, San Antonio, for erection of apartment-house to cost about \$25,000; construction company invites bids on plumbing for eight bathrooms, steam-heating plant and tin and galvanized-iron work. (See "Machinery Wanted.")

St. Louis, Mo.—Albert B. Finch has purchased property having frontage of 350 feet at \$10,500 and will erect row of flats.

St. Louis, Mo.—E. G. Kinney will erect seven one-story apartment-houses estimated to cost \$13,550.

St. Louis, Mo.—Mullanphy Emigrant Aid Society will erect apartment-house; fireproof; three stories; 76x161 feet; 102 rooms; 45 apartments, each having bath; plans by Barnett, Haynes & Barnett of St. Louis.

St. Louis, Mo.—M. A. Ruth Realty Co. purchased site with frontage of 272 feet at \$8200, and will improve with residences and apartment-houses.

St. Louis, Mo.—Stephen C. Rogers purchased site 40x130 feet, on which to erect five and six-room single flat building.

St. Louis, Mo.—J. L. Armstrong purchased site 30x170 feet, on which to erect apartment-house.

St. Louis, Mo.—Louise Temme purchased site 30x260 feet, on which to erect five and six-room apartment-house.

St. Louis, Mo.—John Mueller purchased site 25x134 feet, on which to erect single apartment-house.

St. Louis, Mo.—H. F. Grutzemacher purchased site 50x167 feet on which to erect double set of flats.

St. Louis, Mo.—Mrs. Ida W. Weber purchased site 30x127 feet on which to erect apartment-house.

St. Louis, Mo.—George A. Nagel purchased site 33x127 feet on which to erect five and six-room flat.

Washington, D. C.—Joseph J. Caylor, 1033 6th street N. E., will expend \$16,000 to erect four two-story apartment-houses recently noted; plans by Albert B. Nichols, 1312 F street N. W.; each apartment to have five rooms and bath; hot-water heat; gas and electric lighting; construction by owner.

#### BANK AND OFFICE BUILDINGS

Baltimore, Md.—Builders' Exchange, I. H. Scates, secretary, Builders' Exchange Building, Charles & Lexington streets, has completed arrangements for proposed building at 15 East Fayette street; four stories; first and second floors to be used for permanent exhibition of building materials and supplies; architect, Clyde N. Friz, 11 Pleasant street; contractor, Edward Brady & Son, Cathedral and Howard streets, both of Baltimore.

Birmingham, Ala.—Empire Improvement Co. incorporated with \$300,000 capital stock; will erect Empire office building, recently mentioned; 16 stories; fireproof; 50x100 feet; electric lighting; electric elevators; estimated cost \$350,000; plans by Warren & Welton, Title Guarantee Building, Birmingham, and Carpenter & Blair, 475 Fifth avenue, New York. R. C. Smith is president; A. B. Tanner, secretary-treasurer.

Birmingham, Ala.—National City Bank has not yet selected architect to prepare plans for office and bank building previously mentioned; structure to be fireproof and cost \$500,000.

Bramwell, W. Va.—Pocahontas Consolidated Collieries Co. will, it is reported, erect office building costing about \$250,000.

Charlotte, N. C.—American Trust Co., Geo. Stephens, president, will remodel building recently reported. Hoggson Bros., New York, are preparing tentative plans.

Cochrane, Ala.—Stock company now being formed will erect bank building; probably 25x60 feet; two stories, with offices above; cost \$3000; architect not selected; construction probably by local builders; promoter, John T. Cochrane, president Alabama, Tennessee & Northern Railroad Co., City Bank Building, Mobile, Ala.

Fort Smith, Ark.—Dr. W. W. Bailey & Samuel McLoud, president, and Frank Handlin, cashier, of First National Bank, are interested in erection of bank and office building; 10 stories; 55x150 feet; cost about \$450,000.

Goldsboro, Md.—Banking company to be organized by J. S. Lapham, J. Alda Jackson, W. L. Cooper and others contemplates, it is reported, erecting bank building.

Houston, Texas.—H. L. Stevens Company, Knoxville, Tenn. (also of Houston, Louisville, Ky., and Birmingham, Ala.), are progressing with construction work on proposed office building for Jesse H. Jones, previously mentioned; structure will be of reinforced concrete; eight stories; 45x96 feet; cost about \$100,000.

Houston, Texas.—Jesse H. Jones awarded contract to H. L. Stevens Company, 1010 1/2 Congress street, Houston, for erection of proposed store and office building; fireproof structure; 96x43 feet; eight stories; reinforced concrete; electric lighting; electric elevators; cost \$100,000.

Kansas City, Mo.—Kansas City Stock Yards Co. of Missouri contemplates erecting office building; eight stories; frontage 268 feet; main building to have depth of 100 feet; 50-foot wing will be built from center of main building; fireproof; cost between \$300,000 and \$400,000.

Muskogee, Okla.—Dennis Flynn and C. B. Ames will erect office building; steel; fireproof; seven stories; plans are being prepared.

New Orleans, La.—Audubon Hotel Co. has changed name to Audubon Building Co.; change necessitated by recent amendment of plans to provide for 12-story office building instead of hotel, as originally planned; present plans call for structure 160x160 feet; fireproof construction; overhead system steam heating; electric lighting; traction type electric elevator; vacuum cleaning system; house and fire pumps; ventilating fans; cost \$800,000; plans by Kennedy, Werner & Adkins, 72 Mitchell Building, Cincinnati, Ohio, associate architects. (Recently mentioned.)

Ocala, Ga.—J. C. Luke will erect combination bank, hotel and store building; plans by W. B. Camp, Jacksonville, Fla., to be ready October 20; bids to be opened November 10; three-story brick structure; 100x140 feet; steam heat; electric lighting; passenger and freight elevators.

Sour Lake, Texas.—R. S. Sterling & Co. contemplates, it is reported, erection of brick bank building.

Sylvester, Ga.—Sylvester Banking Co. will erect building recently noted contracted to Little & Phillips, Cordele, Ga.; plans by Lockwood Bros., Columbus, Ga.; two-story structure; stone and brick; ordinary construction, with some fire windows; bank on first floor, offices on second; electric lighting; cost \$7500; bank fixtures, cost \$3500.

#### CHURCHES

Atlanta, Ga.—George C. Thompson of Atlanta prepared plans recently accepted by Wesley Memorial Church for edifice; four stories; 142x94 feet; brick; granite foundation; seating capacity 3000; \$200,000 available. (Lately noted.)

Florida, Ala.—Baptist congregation will erect edifice to cost \$25,000. Address The Pastor, Baptist Church.

Franklin, La.—Roman Catholic Church is having plans prepared by Barnett, Haynes & Barnett, Frisco Building, St. Louis, Mo., for edifice; Roman style of architecture; estimated cost \$40,000; Rev. James H. Trainor, pastor.

Littleton, N. C.—Littleton Baptist Church, J. P. Bowers, pastor, will erect edifice costing from \$7000 to \$8000; size 60x70 feet; hot-air or steam heat; architect not selected; bids to be opened by October 15. A. W. Green, chairman building committee, wishes to correspond with architects and contractors. (Previously mentioned.)

Lumberton, N. C.—Baptist congregation has selected Charles McMillen, Wilmington, N. C., as architect for edifice to cost \$20,000. (Previously mentioned.)

Mineral Wells, Texas.—Baptist congregation has not engaged architect to prepare plans for \$25,000 edifice recently mentioned; J. E. Cunningham, chairman Building Committee.

Norfolk, Va.—McKendree M. E. Church will erect brick addition to church building at cost of \$10,000; George T. Banks of Norfolk, contractor; plans by Ferguson & Calrow, Law Building, Norfolk; two-story addition; 56x90 feet; brick and steel construction; for Sunday-school.

Opelika, Ala.—First Methodist Church adopted plans by Bruce & Everett, Atlanta, Ga., for remodeling edifice; Grecian style of architecture; will provide 23 new Sunday-school rooms; estimated cost \$15,000; brick, stucco and stone trimmings to be used; tile roof; steam heat; electric lighting.

Pleasant Valley, Va.—St. Mark's Reformed Church, Rev. M. A. Kieffer, Harrisonburg, Va., pastor, will erect brick veneer church building at cost of about \$5000.

Prescott, Ark.—Christian Congregation has had plans prepared by J. A. Sullivan, Hope, Ark., for edifice to cost \$4000.

Taylor, Texas.—First Baptist Church awarded contract to S. F. Evens of Taylor at \$2600 for erection of addition to edifice; plans by Henry Struve of Taylor.

#### COURTHOUSES

Springfield, Ga.—Plans and specifications for courthouse to be erected by Effingham county at Springfield can be obtained from H. W. Witcover, architect, National Bank Building, Savannah, Ga., upon deposit of \$25; County Commissioners will open bids for erection November 3; certified check \$1000; contract will be let as a whole; structure will be two stories; brick; ordinary construction; cost about \$20,000. (Recently mentioned.)

Summerville, Ga.—Bids will be received until October 19 for erection of courthouse; each contractor to submit plans with bid. Address T. J. Simmins, chairman, or E. N. Martin, clerk of board; contractors invited to be present. (Grand Jury of Chattooga county recently mentioned as having recommended that \$35,000 be expended for courthouse.)

Sumner, Miss.—Supervisors of Tallahatchie county will have plans prepared by F. B. Hull, Jackson, Miss., for rebuilding burned courthouse; estimated cost \$20,000.

Tulsa, Okla.—Tulsa county is considering erection of courthouse to cost about \$200,000; election will be held November 3 to vote on tax levy. Address County Commissioners.

#### DWELLINGS

Atlanta, Ga.—John S. Candler, Candler Building, awarded contract to Isam N. Brown, Atlanta, for erection of residence recently mentioned; plans by Norman & Falkner, Candler Building, Atlanta; style, French chateau; 14 rooms; conservatory; brick walls; green slate roof; hot-water heat; electric and gas lighting; cost \$20,000.

Atlanta, Ga.—Fitzhugh Knox will erect three two-story dwellings; cost \$15,000.

Bainbridge, Ga.—F. E. Hines will erect residence after plans by W. B. Camp, Jacksonville, Fla.; building, two stories and basement; 38x50 feet; steam heat; electric lighting; plans to be ready November 1; bids to be opened December 1.

Baltimore, Md.—Owners' Realty Co., Charles W. Hurst, president, Calvert Building, has purchased site 400x172 feet on Calvert street and will improve with a number of dwellings.

Baltimore, Md.—Charles F. Kohlstead of Kohlstead & Childs, 915 Frederick avenue extended, has had plans prepared by J. M. Gerber & Son, Baltimore, for eight dwellings on Augusta avenue; two stories; brick; 15x50 feet.

Baltimore, Md.—Frank Novak of Novak & Hirt, 2300 Jefferson street, has had plans prepared by J. F. Hirt of Novak & Hirt, 2300 Jefferson street, Baltimore, for 10 residences on Baxter street; two 14x45 feet, the other eight 12.5x40 feet; two stories; brick porch fronts; cost \$7000.

Baltimore, Md.—Mrs. Sarah E. Litzinger has had plans prepared by F. E. Beall, 213 St. Paul street, Baltimore, for 12 dwellings on Fifth avenue; two stories; brick and reinforced concrete; two to be 15x50 feet, the other 10 13x50 feet; cost about \$1100 each.

Baltimore, Md.—Francis E. Yewell, 2545 N. Calvert street, has purchased site at Charles and 30th streets, with frontage of 200 feet, and will improve with porch-front dwellings.

Baltimore, Md.—J. G. Daneker, 516 Equitable Building, will erect 20 two-story brick dwellings; 15x60 feet; ordinary construction; steam heat; gas and electric lighting; cost \$40,000.

Baltimore, Md.—Jerome G. Daneker, 516 Equitable Building, will erect two-story dwellings; ordinary construction; hot-air heat; gas lighting; cost \$3000.

Baltimore, Md.—J. William Sheffer, Bonner road, is having plans prepared by Jacob F. Gerwig, 210 East Lexington street, Baltimore, for residence on Forrest avenue; frame; slate roof; cost about \$6000.

Baltimore, Md.—Andrew J. Brown, 703 Calvert Building, has had plans prepared by Jacob F. Gerwig, 210 East Lexington street, Baltimore, for residence at Liberty road and Gwynn Oak avenue; site 115x200 feet; cottage type; two and a half stories; slate

roof; cost between \$6000 and \$8000; Mr. Brown will also erect 10 cottages in same location, for which Mr. Gerwig is preparing plans.

Baltimore, Md.—John W. Edel of S. T. Edel's Sons Company, 1217 Harford avenue, is having plans prepared by Jacob F. Gerwig, 210 East Lexington street, Baltimore, for residence at Erdman and Crosslyn avenues; frame; stone foundation; two stories and attic; 40x37 feet; estimated cost \$7000.

Baltimore, Md.—Edward J. Storck, Gunther Building, will erect number of dwellings at Canton street and Fairmount avenue.

Birmingham, Ala.—W. L. Woodruff will erect residence; plans by W. Chamberlin & Co., Birmingham.

Birmingham, Ala.—Mrs. E. F. Herzoff awarded contract to J. W. Bennett for erection of \$4000 residence; two stories; frame; grates; gas and electric lighting.

Birmingham, Ala.—Mrs. Chas. F. Enslin will erect residence after plans by W. Chamberlin & Co., Birmingham.

Catonsville, Md.—John H. Kummer has had plans prepared by Walter M. Gieske, Edmondson avenue, Catonsville, for erection of residence near North Bend lane and Edmondson avenue, near Catonsville; two stories; 10 rooms; frame; exterior shingled; electric wiring; modern plumbing; hot-water heat.

Chattanooga, Tenn.—W. T. Temple, care of Chattanooga Furniture Co., will erect \$5000 residence; plans by D. A. Reamer, First National Bank Building, Chattanooga; pressed-brick structure; two and one-half stories; tile roof; hard-plate interior finish; oak floors; ceramic-tile porch floors; hot-air heat; electric and gas lighting; plans ready October 3.

Chattanooga, Tenn.—S. G. Gentry, James Building, will erect \$8500 residence; two stories and basement; brick and stucco; tile roof; oak interior finish; brick fireplaces; tile hearths; cement composition floors; hot-water or steam heat; electric and gas lighting; plumbing; ceramic and cement tile; plans by D. A. Reamer, First National Bank Building, Chattanooga; bids will be received.

Columbia, Tenn.—John W. Fry and Oscar Dorth contemplate erection of several dwellings.

Galveston, Texas.—Residence recently noted to be erected at quarantine station, for which bids will be opened October 12, will be of wood; five rooms; large hall; porch front; built on piling; cost about \$6000; plans and specifications on file at office of A. Dellsie, architect, Houston, Texas, or at Model Market, Galveston; W. M. Brumby, State Health Officer, Austin, Texas.

Knoxville, Tenn.—S. P. Condon will erect \$10,000 colonial-style residence.

Lexington, Ga.—George C. Smith will erect residence.

Memphis, Tenn.—Dr. E. M. Holder has had plans prepared by Boone & Johnson, Memphis, for residence; 11 rooms; stone veneer; green tile roof; floors and beams of ceilings will be finished in white oak; garage in rear; shower-bath room with solid stone walls; cost \$17,000.

Nashville, Tenn.—Joseph Lindauer will erect residence; stone veneer; cost \$12,000.

Norfolk, Va.—George E. Barrett will erect dwelling; brick and frame; cost \$6000; S. B. Hutchins, Norfolk, contractor.

Ocala, Fla.—J. C. Luke will erect two-story frame residence; architect, W. B. Camp, Jacksonville, Fla.; building 38x48 feet; hot-air heat; electric lighting; plans to be ready October 22; bids to be opened November 1.

Richmond, Va.—C. W. & J. Lee Davis will erect five 10-room and four 7-room brick dwellings; mill construction; hot-water heating; gas and electric lighting; cost \$42,000; plans and construction by C. W. Davis & Bro. (Previously noted.)

Richmond, Va.—W. W. Haley will erect four semi-detached brick dwellings; cost \$14,000.

Richmond, Va.—Warren P. Taylor will erect detached brick dwelling; cost \$9000.

Roland Park, Station L, Baltimore, Md.—Alfred R. Hyatt, Hyatt Manufacturing Co., 1 North Holliday street, Baltimore, will erect residence in Roland Park.

St. Louis, Mo.—Mrs. Anna C. Reifsnider will erect residence.

Washington, D. C.—J. J. Caylor, 1033 6th street N. E., has had plans prepared by A. B. Nichols, 514 Columbia road N. W., Washington, and will erect for himself four dwellings at 611-617 L street N. E.; two stories; brick; cost \$14,000.

Waynesboro, Miss.—H. H. Moore will erect two-story dwelling.

Winston-Salem, N. C.—J. Conrad Watkins has had plans prepared by W. C. Northrup, Winston-Salem, for eight or nine-room residence.

## GOVERNMENT AND STATE BUILDINGS

Burrwood, La.—John S. Attenhofer, probably of New Orleans, La., is lowest bidder at \$46,870 for erection of reinforced-concrete buildings at Burrwood; R. H. Ruffner, Colonel, Engineers, U. S. Engineer's Office, Customhouse, New Orleans, La. (Recently mentioned.)

Charlottesville, Va.—Postoffice.—Norcross Bros. Company, Worcester, Mass., is lowest bidder at \$30,800 for alterations to U. S. postoffice and courthouse at Charlottesville; New York offices of company at 160 Fifth avenue.

Fort Monroe, Va.—Hospital.—David McC. McKell, Quartermaster, Fort Monroe, will receive bids until October 19 for repairs to building and plumbing of post hospital; bidders to state in proposal names of manufacturers furnishing material; information on application. (See "Machinery Wanted.")

Marietta, Ga.—Postoffice.—Bids will be received at Treasury Department, office of James Knox Taylor, supervising architect, Washington, D. C., until November 4 for construction complete of United States postoffice at Marietta in accordance with drawings and specifications, copies of which may be had at above office or of custodian of site at Marietta, at discretion of supervising architect.

Washington, D. C.—Laboratory.—J. E. & A. L. Pennock, Land Title Building, Philadelphia, Pa., have contract for erection of laboratory building for Bureau of Standards, Department of Commerce and Labor; plans by Wood, Donn & Deming, architects, 808 17th street N. W., Washington. (Recently mentioned.)

## HOTELS

Birmingham, Ala.—T. K. Tierce will award contract October 10 for erection of proposed \$22,000 store and hotel building after plans by H. D. Breeding, Birmingham. (See "Miscellaneous Structures.")

Dallas, Texas.—Ocie Goodwin and J. F. Strickland, both of Dallas, and J. L. Gammon, Waxahatchie, Texas, purchasers of Park Hotel, awarded contract for about \$10,000 worth of improvements, including electric plant, steam-heating apparatus, etc.

Greensboro, N. C.—Mrs. Ada Kirkman, 508 Buchanan street, had plans prepared by G. W. Armfield, Greensboro, for three-story hotel building recently mentioned; to have four-story front; electric lighting; cost \$10,000; contract not awarded.

Jacksonville, Fla.—Lackawanna Spring & Hotel Co. incorporated with \$200,000 capital stock to develop Lackawanna Springs and erect hotel; James A. Hollomon, president; W. B. Owen, vice-president; F. F. Kerner, secretary-treasurer; office, 311 Realty Building, Forsyth and Newman streets.

Macon, Ga.—Alex. and Isaac Block will erect 80-room hotel.

Nashville, Tenn.—E. T. Lewis Company of Nashville has contract for excavation for hotel to be erected by Hermitage Hotel Co., E. A. Lindsey, secretary; structure will be 10 stories; fireproof; 200 rooms; steam heat; electric lighting; electric elevators; estimated cost \$250,000; plans by Carpenter & Blair, 475 Fifth avenue, New York. (Recently mentioned.)

Ocala, Fla.—J. C. Luke is having plans prepared for hotel, bank and store building by W. B. Camp, Jacksonville, Fla. (See "Bank and Office Buildings.")

Oxford, N. C.—Smith Lithia Water Co., incorporated with \$50,000 capital stock by R. T. Smith and others, includes in charter privileges erection of hotel, etc. (See "Miscellaneous Enterprises.")

Port Arthur, Texas.—Port Arthur Hotel Co., Jan Van Tyen, president, awarded contract to H. G. Applegate & Son, Beaumont, Texas, for erection of hotel; three stories; concrete; ordinary construction; lighting of city electric plant; medium-speed elevator; estimated cost \$90,000; plans by C. A. Logan of Port Arthur. (Lately noted.)

Quincy, Fla.—Quincy Hotel Co. will erect hotel mentioned in July; W. B. Camp, Jacksonville, Fla., is preparing plans; brick structure; 75x123 feet; three stories and basement; 20 bathrooms; steam heat; electric lighting; passenger and freight elevators; cost \$30,000; bids to be opened October 25.

San Antonio, Texas.—San Antonio Hotel

Co.'s eight-story steel-frame hotel, recently mentioned, will contain 130 bathrooms; estimated cost \$550,000; contractor, Westlake Construction Co.; architects, Mauran, Russell & Garden, both of St. Louis, Mo.; L. J. Hart is company's president. (Further details recently mentioned.)

Sulphur Spring (not a postoffice), Fla.—Josiah Richardson, Tampa, Fla., will erect hotel at Sulphur Spring, near Tampa; frame; two and one-half stories; steam heat; electric lighting; cost \$9000 to \$10,000; construction by days' work.

## MISCELLANEOUS STRUCTURES

Augusta, Ga.—Store Building.—Nixon Grocery Co. will erect store building. (See "Warehouses.")

Baltimore, Md.—Store Building.—Hecht Bros., proprietors of The Hub, Baltimore and Charles streets, have purchased Lertz Building and lot adjoining on North Charles street; present structure will be connected with Lertz Building by bridge over and tunnel under alley; fireproof structure will be erected on lot; cost (including purchase) between \$50,000 and \$75,000.

Baltimore, Md.—Store Building.—J. G. Daneker, Equitable Building, will erect store building. (See "Dwellings.")

Baltimore, Md.—Hall.—John J. Cowan, 901 Hollins street, will erect hall and stable at Lombard and Calender streets; three stories; brick; 32x132 feet; cost \$12,000.

Birmingham, Ala.—Stores, etc.—T. K. Tierce will award contract October 10 for erection of proposed store and hotel building; plans by H. D. Breeding, Birmingham; three-story structure; 50x140 feet; brick and stone; steam heat; electric lighting; cost \$22,000.

Bluefield, W. Va.—Store, etc.—P. T. Lilly awarded contract to D. W. Fulp, Bluefield, for erection of building recently mentioned; store and apartments; plans by T. T. Carter, Bluefield; fireproof structure; 35x76 feet; three stories; brick and stone; electric lighting; cost \$8000.

Charlotte, N. C.—Clubhouse.—Southern Manufacturers' Club accepted plans by Hook & Rogers, Charlotte, for proposed club building; pressed brick; four stories; colonial style; broad porticos; terraces; deep-set balconies; walls will be of Harvard brick, when laid up to have tapestry effect; corner quoins, sills, belts, water tables, lintels, etc., to be of stone of color to harmonize with the brick; terraces to be floored with old-style red promenade tiles; top cornice of building to have pergola treatment upon which vines may trail.

Chattanooga, Tenn.—Business Building.—J. R. Barnes awarded contract to Holmes Bros., Chattanooga, for erection of business building recently mentioned; five stories; brick; 50x150 feet; mill construction; foundation capable of supporting structure twice the proposed size; cost about \$10,000; plans by J. G. Barnwell, Chattanooga.

Columbus, Ga.—Sanatorium.—Dr. J. M. Anderson and associates will, it is reported, organize company with \$15,000 capital stock to establish sanatorium in Nebula; will erect square building containing 40 rooms, in addition to offices, etc.; within building will be court, in center of which will be dining hall; three stories; first floor will be dining room; second floor, serving room; third floor, science hall; walks will lead from all four sides of square building to dining hall; rooms will be so arranged that patients will sleep in open air; cost of buildings about \$9000.

Dallas, Texas.—Business Buildings.—B. L. Fielder, Sherman, Texas, will erect several business buildings in Dallas.

Dallas, Texas.—Business Building.—E. H. Ray will erect three-story brick business building.

Gulfport, Miss.—Masonic Temple.—Masonic Lodge has had plans prepared and will soon award contract for erection of proposed Masonic Temple; 45x60 feet; several stories high.

Jonesboro, Ark.—Store Building.—Marcus Berger Wholesale Grocery Co. will erect \$5000 brick store building.

Lagrange, Ga.—Elks' Home.—Elks' Home Co. will open bids about October 10 for erection of Elks' Home and Clubrooms; two-story brick building; 42½x132 feet; ordinary construction; heating not determined; electric lighting; cost \$10,000; John D. Faver, secretary and treasurer. (Company noted incorporated in August.)

Lagrange, Texas.—Store.—H. F. Lange will erect store building recently mentioned; no architect employed; plans not complete; as proposed, building to be 34x96 feet; concrete blocks; reinforced girders; concrete floor;

fireproof windows and skylight; concrete blocks from plant of owner, who will superintend construction. Mr. Lange is also contemplating erection of factory. (See "Concrete and Cement Plants" and "Machinery Wanted.")

Marietta, Ga.—Store Buildings.—C. T. Nolan will erect two store buildings; two stories; brick; glass fronts.

Memphis, Tenn.—Store, etc.—Young & Morrow, Winona, Miss., awarded contract to R. Jesty & Co., Winona, for erection of proposed two-story store and flat building; cost \$12,000; plans by John Galsford, Memphis.

Ocala, Ga.—Stores, etc.—J. C. Luke is having plans prepared by W. B. Camp, Jacksonville, Fla., for erection of two-story brick business building mentioned in August; 50x125 feet; stores and offices; steam heat; electric lighting; plans ready October 6; bids opened October 17.

Oklahoma City, Okla.—Business Building.—Frank P. Johnson will erect business building 50x140 feet.

Oklahoma City, Okla.—Store Building.—Gerson Bros. will erect store building; four stories; reinforced concrete; 25x140 feet; cost about \$40,000.

Orange, Texas.—Store Building.—B. F. Hewson awarded contract to Chauvin & McGroory, Orange, for erection of store building to replace burned structure; brick; one story; 25x90 feet; tile and concrete floor; will also erect store building one story; brick; 50x70 feet, divided into two store-rooms; contract not yet awarded.

Raleigh, N. C.—Hospital.—Central Hospital for the Insane, James McKee, superintendent, will establish male and female colonies; will erect building for women; two stories and basement; 80 rooms; 233x57 feet; city water will be supplied; colony for males will have three buildings, each two stories, and capacity of 100; proposed to erect buildings in form of fan, with administration building at tip of handle; boiler-room will be located in valley between present building and this colony, so that steam can be supplied readily to both main buildings and colonies; sewer connections will be made.

Spartanburg, S. C.—Garage.—Leonard Becker will erect garage; site 72x90 feet; one story; brick.

Spartanburg, S. C.—Store Building.—N. S. Tranks will erect store building; three stories; site 45x120 feet.

St. Louis, Mo.—Association Building.—Women's Christian Association awarded contract to R. A. Anderson & Co., St. Louis, for erection of blind girls' home, mentioned in August; 100x142 feet; brick, with stone and terra-cotta trimmings; terra-cotta roof; electric lights; cost \$60,000; plans by J. Hal Lynch, 7th and Locust streets, St. Louis.

Sykesville, Md.—Asylum.—Springfield Asylum will erect additional building for accommodation of insane.

Tampa, Fla.—Y. M. C. A. Building.—Young Men's Christian Association has had plans prepared by Bonfoey & Elliott, Tampa, for association building; 70x102 feet; five stories; cost about \$70,000.

Tampa, Fla.—Store Building.—Bryan & Lightsey will probably rebuild store building reported destroyed by fire; loss, \$10,000.

Timberville, Va.—Orphanage.—Church of the Brethren will open bids October 16 for furnishing material and erecting orphanage; bids will be received as a whole or separate bids for excavation, stone work, carpentry, mill work, plastering, roofing and painting; plans and specifications on file at office of Thomas & Co., Harrisonburg, Va.; bids to be addressed to P. S. Thomas, secretary, Harrisonburg, Va.

Tuscaloosa, Ala.—Hospital.—Dr. Alston Pitts will erect hospital building.

Washington, D. C.—Garage.—Auto Livery Co., A. L. Cline, president, 226 14th street N. W., will erect garage with 12,000 square feet of floor space; to accommodate 75 machines; will contain offices, chauffeurs' quarters, sleeping-rooms, lounging-rooms, locker-rooms and machine shop.

Waynesboro, Miss.—Store Building.—J. A. Smith will erect brick store building.

Waynesboro, Miss.—Sanitarium.—Drs. Rush & Rush will erect sanitarium.

Winston-Salem, N. C.—Store Buildings.—H. G. Chatham awarded contract to R. L. Pindexter, Elkin and Winston-Salem, N. C., for erection of store building; three stories; 44x90 feet; ordinary construction; cost about \$8000; plans by W. Miller, Winston-Salem. (See "Machinery Wanted.")

Yokum, Texas.—Business Building.—F. J. Baby will erect brick business building.

Ybor City, Fla.—V. Greco and E. H. Steinberg have had plans prepared by Miller &



Kennard, Tampa, Fla., for two business buildings; frontage 70 feet; brick; cost about \$20,500; Bates & Hudnall, Tampa, Fla., contractors. (Mentioned in July.)

### MUNICIPAL BUILDINGS

Baltimore, Md.—Jail.—Following contractors will submit bids on additional cell room at city jail: B. F. Bennett Building & Engineering Co., 123 South Howard street; John Waters, 23 East Centre street; David M. Andrew Company, 404 Vickers Building; American Contracting Co., American Building; Noel Construction Co., Calvert and German streets; Henry S. Rippel, 1-7 Clay street, all of Baltimore; Stewart Jail Works Co., Covington, Ky. Theodore W. Pietsch, American Building, Baltimore, has prepared plans. (Recently mentioned.)

Baltimore, Md.—Library.—Joseph Evans Sperry, 409 Calvert Building, has prepared plans for Enoch Pratt Library building to be erected at Barre and St. Peter streets; one story; red brick, with brownstone trimmings; \$500,000 available for this and other libraries. Bids are to be submitted on October 8 by following contractors: Morrow Bros., 218 West Saratoga street; Henry Smith & Sons Company, 116 to 120 South Regester street; John Cowan, 106 West Madison street; B. F. Bennett Building & Engineering Co., 123 South Howard street; Edward Brady & Son, Cathedral and Howard streets; J. Henry Miller, 110-112 Dover street; John Waters, 23 East Center street, all of Baltimore. (Recently mentioned.)

Chattanooga, Tenn.—City Hall.—Joseph Trimby, News Building, Chattanooga, general contractor for erection of \$300,000 City Hall, awarded sub-contract to C. W. Hammett, James Building, Chattanooga, for fireproof hollow-tile partitions at about \$7500; work to begin about November 1. (City Hall previously mentioned.)

Chickasha, Okla.—City Hall, etc.—City Council invites architects to submit plans until October 22 for construction of combination City Hall, jail and fire station; site 50x165 feet; south and east front; prefer to have jail and accommodation for police department in basement; basement to be 10-foot ceiling, one-half above ground; offices to be required for Mayor, city clerk, water superintendent, street commissioner, etc.; structure to be two stories, exclusive of basement; brick and stone; auditorium on upper floor; stockade for prisoners to break stone in basement; amount to be expended, including architect's fees, \$27,000; B. R. Bridges, Mayor. (Recently mentioned.)

Dallas, Texas.—City Hall.—City is having plans prepared for remodeling basement of City Hall at cost of about \$10,000; plans will provide for emergency hospital in old Corporation courtroom, new plumbing and heating systems, etc. Address The Mayor.

Excelsior Springs, Mo.—Library.—City has begun erection of proposed library and restroom to cost about \$10,000. Address The Mayor.

Little Rock, Ark.—Fire Station.—Michael Forster will erect fire station, which has been leased by city for 10 years.

West End, P. O. Birmingham, Ala.—City Hall and Fire Station.—City will vote November 2 on issuance of \$10,000 for erection of building to be used as fire department headquarters and city hall. Address The Mayor.

Winston-Salem, N. C.—Market and Firehouse.—City awarded contract to G. E. Miller and Mr. Butner of Winston-Salem at \$7000 to erect combination firehouse and market; 52x78 feet; two stories; brick; plans by J. S. Zimmerman, Municipal Building, Winston-Salem. (Recently noted.)

### RAILWAY STATIONS

Mobile, Ala.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., will erect passenger station in Mobile at cost of \$100,000; contracts for material have been let, and practically all furnished; company's employees are constructing the building.

Shepherdstown, W. Va.—Norfolk & Western Railway, C. S. Churchill, chief engineer, Roanoke, Va., will, it is reported, erect depot at Shepherdstown.

### SCHOOLS

Agricultural College, Miss.—Mississippi Agricultural and Mechanical College awarded contract to W. T. Christopher, Gadsden, Ala., for erection of academic and administration building; plans by R. H. Hunt, Chattanooga; three stories and basement;

brick; stone and terra-cotta trimmings; slate roof; ordinary construction; steam heat; electric lighting; cost \$85,000; furnishings, \$15,000 additional. (Recently mentioned. See "Machinery Wanted.")

Atmore, Ala.—Escambia county will erect high school recently mentioned; two-story brick building; about 100x108 feet; electric lighting; cost \$12,500; plans by Okell & Cooper; contractor, T. H. Walnwright.

Berkley, P. O. Norfolk, Va.—City awarded contracts to J. W. Jones, Norfolk, at \$17,068 for erection of proposed school building in Berkley; Peck & Hammond Company, Norfolk, at \$1875 for heating, and to W. D. Murray & Co., Norfolk, at \$1250 for piling.

Bridgeport, Ala.—Alatunga College awarded contract to Lee & Hawkes, Bridgeport, for erection of dormitory mentioned in August; two stories and basement; cement blocks and succo; metal tile-shingle roof; steam heating; cost \$5000; architect, D. V. Stroop, James Building, Chattanooga.

Clifton, Ky.—City will vote November 3 on \$12,000 bond issue for erection of school building. Address The Mayor.

Fort Gibson, Ark.—City awarded contract to John Blevins, Van Buren, Ark., for erection of proposed school building. (Bond issue noted in July.)

Hartsville, S. C.—Coker College for Women, Dr. E. V. Baldy, president, is having plans prepared by C. C. Wilson, Columbia, S. C., for auditorium and administration building; brick; seating capacity 800; cost \$25,000.

Houston, Texas.—Bids will be opened October 20 for furnishing material, labor and erecting engineering building at Agricultural and Mechanical College; plans and specifications on file at office of F. E. Giesecke, college architect; R. T. Milner, president.

Kansas City, Mo.—Jewish Educational Institute will erect building; ornamental brick and stone; two stories; frontage 142 feet; roof garden; auditorium; cost \$25,000.

Lone Wolf, Okla.—City has voted \$20,000 of bonds for erection of school building; structure will face three ways; brick and stone; steam heat. Address The Mayor.

Lynchburg, Va.—Virginia Christian College awarded contract to Jones Adams, Lynchburg, for erection of college building; colonial architecture; two stories and basement; cost about \$30,000; plans by E. G. Fry, 15-16 Lynchburg National Bank Building, Lynchburg. (Recently mentioned.)

Oklahoma City, Okla.—City will erect school building; three stories and basement; fireproof; accommodate 1500 students; frontage of 200 feet, extending 300 feet in the rear. Address The Mayor. (Recently noted to vote November 3 on \$300,000 bond issue.)

Paris, Ark.—City is having plans prepared by Gibbs & Sanders, Little Rock, Ark., for high-school building; brick 10 rooms; cost \$25,000.

Quitman, Ga.—City will probably vote on \$40,000 bond issue for erection of school building. Address The Mayor.

Quitman, Miss.—Bids will be opened October 15 for erection of two-story and basement school building; certified check for 2 per cent. amount of bid; plans and specifications on file at offices of Hutchison & Garvin, architects, Mobile, Ala., and S. H. Terrel, Quitman. (Recently mentioned.)

Raleigh, N. C.—State School for the Blind and the Deaf has not yet selected architect to prepare plans for \$5000 library building recently mentioned; fireproof structure; about 40x10 feet; steam heat; gas and electric lighting. John E. Ray, principal, will receive competitive plans and specifications. (See "Machinery Wanted.")

Shawnee, Okla.—City will vote November 3 on \$120,000 bond issue for school improvements. Address The Mayor.

Siddell, La.—City will probably vote on \$20,000 bond issue for erection of high school building. Address The Mayor.

Snyder, Okla.—City has voted \$23,000 of bonds for erection of school building. Address The Mayor. (Recently mentioned.)

West End, P. O. Birmingham, Ala.—City will vote November 2 on \$25,000 bond issue for erection of school building in West End. Address The Mayor.

Wheeling, W. Va.—City awarded contract at \$8,999 to W. W. Wood Company, Wheeling, for erection of high-school building; plans by Glessey & Faris, Schuylbach Building, Wheeling. (Recently mentioned.)

### THEATERS

Gainesville, Texas.—Gainesville Opera House Co. incorporated with \$15,000 capital stock by C. C. Marshall, Paul Gallia and W. O. Brown.

Lancaster, Ky.—Company has been organized to erect opera-house; 60x90 feet; cost \$8000; R. H. Batson, president; B. T. Hudson, treasurer; L. G. Davidson, secretary.

Paris, Texas.—Jewel Theater Co., recently reported incorporated, awarded contract to Campbell & Owens for remodeling of theater; construction begun; H. W. Neville, manager.

### WAREHOUSES

Augusta, Ga.—Nixon Grocery Co. will erect warehouse, grain elevator and store building at cost of \$15,000.

Baltimore, Md.—J. W. and William B. Hargrave, 409 North Carrollton avenue, will erect warehouse on Gay street; three stories; brick; slag roof; steam heat; site 26x132 feet; reported cost \$14,000.

Baltimore, Md.—H. M. Wagner & Co., Eutaw and Hamburg streets, have purchased warehouse property at Pratt, Fremont and Dover streets, consisting of three store buildings of four stories, total floor space being about 30,000 square feet; buildings will be enlarged and improved; transaction involves about \$25,000.

Macon, Ga.—Glenn G. Toole will erect warehouse; three stories; brick; cost about \$12,000.

Macon, Miss.—Salem Warehouse Co. incorporated with \$10,000 capital stock by S. W. Adams, Ira D. Guy, Charles E. Lindley, Charles C. Pierce and others.

Mobile, Ala.—Martin Lindsay, Pollard, Ala., awarded contract to Jett Bros., Mobile, to erect warehouse; four stories; brick; estimated cost \$30,000.

Northfork, W. Va.—Armour & Co. awarded contract to Rosal & Shaw, Northfork, for erection of addition to refrigerator warehouse and construction of retaining wall in rear of building.

Richmond, Va.—Richmond Stove Co. will erect brick warehouse to cost \$15,000, replacing burned structure. (Company's stove works previously reported burned.)

Round Mountain, Ala.—Round Mountain Warehouse Co. incorporated with \$5000 capital stock by G. O. Stout, John Chancellor, John Elliott, J. M. Davis and others.

St. Louis, Mo.—Union Brewing Co. will erect storehouse at cost of \$16,000.

Tampa, Fla.—Aulick & Deratt of Tampa are lowest bidders at \$13,497 for erection of warehouse for Cameron & Barkley Company; plans by Shaw & Jay of Tampa. (Recently described.)

### RAILROAD CONSTRUCTION RAILWAYS

Atlanta, Ga.—The Atlanta Northeastern Railroad Co. has been authorized to issue \$1,200,000 of stocks and bonds to build its proposed line from Atlanta to Cumming, Ga., 42 miles, for which charter was granted some time ago. T. F. Martin and J. L. Murphy of Atlanta and others as heretofore reported are interested.

Baltimore, Md.—The Baltimore & Ohio Railroad has built 4500 feet of single track from Alken, Md., at the eastern end of its Susquehanna bridge, to a point on the Pennsylvania Railroad's Port Deposit branch, 700 feet north of Perryville, for detouring trains during the rebuilding of the bridge. On the other side of the river, from Osborne, Md., on the Baltimore & Ohio, to Oakington, on the Pennsylvania, the Baltimore & Ohio will build 3000 feet of double-track line, also for detouring; work will be done by the company under D. D. Carothers, chief engineer.

Carson, Miss.—The Geneva Lumber Co. of Carson, it is reported, is building an addition of 2½ miles to its lumber railroad.

Chillicothe, Texas.—The Kansas City, Mexico & Orient Railway is reported to have completed its line to Chillicothe.

Elkin, N. C.—The Elkin & Alleghany Railroad Co. is reported to have graded six miles of its proposed line from Elkin to Sparta, N. C., 30 miles.

Engelhard, N. C.—The Mattamusket Railroad Co. is reported to have graded 44 miles of line ready for track between Fairfield and Scranton, and about 14 miles more are to be graded. H. C. Carter, S. S. Mason and others are interested.

Fort Worth, Texas.—Baxter Brown of St. Louis, chief engineer of the proposed Fort Worth, Weatherford & Mineral Wells Interurban Electric Railway, will, it is reported, complete survey in about two weeks, and it is expected that C. B. Duffey will do the construction. Stuart Harrison of Fort Worth and others are interested, including the Fort Worth Board of Trade, of which Frank M. Rogers is president.

Gandisi, Miss.—The Mason Lumber Co. of Gandisi will, it is reported, build three miles of railroad.

Griffin, Ga.—Mr. W. F. Smith of Floyville, Ga., advises the Manufacturers' Record that the Middle Georgia Interurban Railway Co., which contemplates building an electric railway about 70 miles long, has not organized yet. He also writes that an old roadbed between Jackson and Griffin, Ga., and another old roadbed between Social Circle, Mansfield and Monticello, Ga., are to be connected and used together with the Floyville & Indian Spring Railroad, now operated with dummy engines. The line is to be operated from the Central Georgia Power Co.'s plant now building on the Ocmulgee river six miles from Floyville.

Hamlet, N. C.—The North & South Carolina Railway Co. has applied for a charter in South Carolina. The proposed line is from some point in Marlboro county, on the North Carolina boundary, to some point in Marion county, and it will be 40 miles long. Capital, \$20,000. W. R. Bonnal, S. O. Bauersfeld and Charles Gibbons of Hamlet, N. C., are the petitioners.

Houston, Texas.—The Houston Business League is reported to be interested in a movement to build an interurban electric railway from Houston to Beaumont, Texas. The secretary can probably give information.

Little Rock, Ark.—A meeting of the Little Rock, Sheridan & Saline River Railway Co. has been called for October 28 in Little Rock to act upon a proposed bond issue of \$75,000 of 5 per cents. S. H. Fullerton, R. E. Farrell, Wm. E. Farrell, L. E. Farrell and C. B. Myers are directors.

Magnolia, Ark.—The Manufacturers' Record is informed that the Gulf & Magnolia Northern Railway Co. proposes to build from Magnolia via Waldo to Hope, Ark., 35 miles. Engineer not yet engaged, but negotiations are under way for a survey to begin within 30 days; capital \$1,000,000, with \$100,000 subscribed and 5 per cent. paid in to cover preliminary work. The officers are W. Y. Foster of Hope, Ark., president; J. M. Davis of Waldo, Ark., vice-president; J. L. Davis of Magnolia, Ark., treasurer; Samuel Q. Sevier of Hope, Ark., secretary. The directors include the officers and J. H. Betts, R. M. Briant and A. L. Black of Hope, Ark.; R. S. Warnock, J. M. Witt, W. W. Boyd and Henry Stevens of Magnolia, Ark.; Chas. Clark and T. S. Cook of Waldo, Ark.; executive committee, W. Y. Foster, chairman; S. Q. Sevier, secretary; W. H. Warnock, Stephen Corrigan and M. D. Clark; headquarters at Hope, Ark.

Mangum, Okla.—A movement is reported under way to build an electric railway from Mangum to Vinson and Reed, Okla., and perhaps finally to also reach Hollis, Eldorado, Altus, Blair and other points. Among the interested are Lee Hawkins, J. O. McAlester and D. J. Doyle of Mangum, John Gault, Joseph Thompson, T. C. Dial and W. P. Ponder of Reed, Okla.; James Duffy, J. W. Brookman and R. E. Roach of Vinson, Okla.

Meridian, Miss.—The Mississippi & Southwestern Railroad Co. or Mississippi River Western Railroad Co. is reported to have organized and will apply for a charter; capital \$2,000,000; bonds \$1,500,000, of 5 per cents. The officers are: K. Threefoot, president; J. W. Hudson, vice-president; W. A. Wall, general agent; W. M. Cornell, industrial agent, all of whom are directors, the other members of the board being J. A. Gibson, S. T. Ryan, T. L. McKen, W. T. Rogers, W. M. Reed, O. J. Harrison, S. M. Whitforth, J. B. Curry, C. T. Williamson, B. J. Hamrick, J. A. Porter and A. H. Longino. The proposed line is from Meridian southwest via Mendenhall to Natchez, Miss., about 175 miles.

Mt. Sterling, Ky.—The Cincinnati, Kentucky & Virginia Railway Co. is reported to have completed considerable survey, and will cross Flat creek on a bridge 110 feet high. Work is expected to begin November 1. T. C. Beyland is vice-president, 202 Railway Exchange, Chicago, and W. D. Gerber is chief engineer at Yale, Ky.

Palestine, Texas.—The International & Great Northern Railroad will, it is reported, rebalast about 1000 miles of line. O. H. Crittenden is chief engineer at Palestine, Texas.

Palmyra, Va.—The Virginia Air Line Railway has, it is reported, completed another section of 15 miles of track from Palmyra to Strathmore and will begin using it immediately.

Petersburg, Va.—The Norfolk & Western Railway, it is reported, contemplates building a belt line around Petersburg. C. R. Churchill is chief engineer at Roanoke, Va.

Register, Ga.—Reported that application

has been made to charter a railway company for a line from Register to Rocky Ford, 25 miles. Each terminal is on the Central of Georgia Railway. Survey is to be made immediately; capital \$150,000. The incorporators are G. W. DeLoach, S. T. Ellis, M. A. Smith, D. C. Newton, J. M. DeLoach, L. B. Godbee, P. M. Anderson and W. G. Warnell of Tattnall county, Reidsville being the county-seat, and J. E. Donohoo, J. W. Williams and F. P. Register of Bulloch county, Statesboro being the county-seat.

Rome, Ga.—Concerning the press report that the Central of Georgia Railway was surveying between Cedartown and Sprite to build a cut-off, an officer informs the Manufacturers' Record that no surveys are being made for extensions or changes of line in the near future.

Rusk, Texas.—The Suderman-Dolson Company of Rusk, Texas, will, it is reported, immediately sublet four miles of grading on the line of the Texas & New Orleans Railroad from Rusk to Palestine, eight miles.

Rusk, Texas.—An official of the State Penitentiary Board, which controls the Texas State Railroad, is reported as saying that line has been finished for 17 miles from Rusk westward to a point nine miles west of the Neches river, and construction is in progress to build the line 13 miles farther to Palestine, Texas. Convict labor is employed, and the work is heavy. J. W. Wright is financial agent at Tyler, Texas.

Spring Hope, N. C.—Relative to the report that the Montgomery Lumber Co. was building a standard-gauge railway from Spring Hope via Bunn to either Lenoir or Raleigh, N. C., an officer of the company informs the Manufacturers' Record that it is building only a good logging road in a businesslike manner.

Sugarland, Texas.—The Sugarland Railway, it is reported, contemplates making repairs. Jonathan Lane is president at Sugarland, Texas.

Tulsa, Okla.—The Mid-Continent Traction Co., chartered last year to build an electric railway 110 miles long from Tulsa to Sapulpa and Shawnee, connecting also intermediate points, is reported to be reorganizing with new capital from Kansas City, Indianapolis and Detroit for resuming construction; headquarters at Tulsa, Okla. F. L. Smart is president; Graham Burnham, vice-president and general manager; F. Brown, treasurer; J. Robert Burnham, chief engineer, all at Tulsa.

### STREET RAILWAYS

Bay St. Louis, Miss.—Reported that application will be made for an electric street railway franchise by a New Orleans syndicate represented by Peter Stiff of that city.

New Martinsville, W. Va.—President Henry W. McCoy of the Union Traction Co. is reported as saying that an extension to Proctor will be built.

Uvalde, Texas.—An official is reported as saying that the contract to build the Uvalde Street Railway has been let to the Weber-Duller Construction Co. of Houston, Texas, the franchise for the line being held by Kearby & Smith of Austin, Texas. Line will be three miles long, and is to be heavily built for gasoline motor cars. A later report says that construction has begun from the Uvalde depot to the main plaza, two miles, and during the winter nearly six miles of construction will be done.

### MACHINERY, PROPOSALS AND SUPPLIES WANTED

**Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.**

Air Compressors.—C. Behlen, 72 Trinity place, New York, wants second-hand air compressors; capacity, 500 to 1500 cubic feet of free air per minute; gas or belt driven; if belt driven, wants gas engines to operate same.

Beltling.—Hodges & Starns, Johnson, La., want 50 feet No. 1 eight-inch four-ply and 50 feet No. 1 four-inch four-ply beltling.

Boiler.—Paris Box & Manufacturing Co., Paris, Texas, in market for boiler.

Boiler.—Shand Builders' Supply Co., Columbia, S. C., wants 100-horse-power return tubular boiler, built for working steam pressure of 120 pounds.

Boiler.—Machinery Exchange, Fayetteville, N. C., wants second-hand 20-horse-power boiler.

Boiler.—R. F. Shedden, English-American Building, Atlanta, Ga., wants boiler for brick plant.

Boiler.—Madison Milling & Manufacturing Co., Madison, Ga., wants 80-horse-power tubular boiler.

Boiler.—J. H. Bailey, Hartwell, Ga., wants boiler. (See "Sawmill Equipment.")

Boilers.—See "Irrigation Plant."

Boilers.—Thornhill Wagon Co., Lynchburg, Va., wants two 100-horse-power full-front return tubular boilers for 100-pound pressure, with all castings and fittings complete; size of boiler 66 inches by 16 feet; prices f. o. b. Lynchburg.

Box Machinery.—Paris Box & Manufacturing Co., Paris, Texas, in market for new and second-hand box machinery.

Brick Machinery.—R. F. Lyemance, Jacksboro, Tenn., will need prices on equipment for brick plant.

Brick Machinery.—J. M. Youngblood, Valdosta, Ga., wants to correspond with manufacturers of brick machinery.

Brick Plant.—R. F. Shedden, English-American Building, Atlanta, Ga., wants brick plant, including machines, drykilns, rails, cars, boiler, engine, etc.

Bricks.—Will H. Suits, Wadesboro, N. C., wants names and addresses of manufacturers of Baltimore red pressed bricks.

Bridge Construction.—S. B. Wycough, county judge of Independence county, Batesville, Ark., will award contract October 22 for construction of steel bridge across "Island Slough," near Newark, Ark.; bridge to be 120 feet long, with 12-foot roadway and concrete or stone piers; contractor will not be required to build approaches; plans and specifications will be prepared and filed with County Clerk, Batesville; certified check \$50.

Bridge Construction.—Supervisors and County Commissioners of Newberry and Saluda counties, South Carolina, will award contract October 16 for construction of bridge over Saluda river at Chappells Depot, S. C., between the two counties; J. Monroe Wicker, supervisor of Newberry county, and H. C. Holloway, clerk Board of Commissioners Newberry county, Newberry, S. C.; B. T. Mack, supervisor of Saluda county, and B. F. Samples, Sr., clerk Board of Commissioners Saluda county, Saluda, S. C.

Bridge Construction.—Spartanburg County Commissioners, Spartanburg, S. C., will receive bids until October 19 for construction of steel bridge, known as Hill's, over Tyger river. Plans on file in office of Commissioners; W. Frank West, supervisor; S. M. Bagwell, clerk of board.

Bridge Construction.—State Highway Commission, Richmond, Va., will receive bids until October 19 for erection complete of one 80-foot-span steel bridge in Charlotte county, Va. Plans and specifications may be seen at office of Commission; certified check, \$200; further information furnished on application to P. St. J. Wilson, State Highway Commissioner.

Cannery Equipment.—Bunkie Canning Co., C. M. Hughes, president, Bunkie, La., wants prices on equipment for cannery with capacity of 12,000 cans daily.

Cars.—Joseph E. Bowen, 901 Bank of Commerce Building, Norfolk, Va., wants several cheap 36-inch-gauge flat cars or trucks.

Cars.—R. F. Shedden, English-American Building, Atlanta, Ga., wants cars for brick plant.

Coaling Chutes.—A. M. Walkup, Richmond, Va., will require three coaling chutes; delivery at Norfolk.

Concrete Machinery.—Ben L. Jones, 611 3d street, Macon, Ga., wants concrete machinery.

Cotton Gin.—Talbotton Manufacturing Co., J. W. Jordan, secretary, Talbotton, Ga., is receiving bids on machinery for cotton gin of 35 bales per day capacity.

Cement.—J. Will Jones, Fairview, N. C., wants cement.

Crane.—Shepherd Engineering Co., Williamsport, Pa., wants hand-power traveling crane, 8 to 10 tons capacity, 30 to 40-foot span; good condition. Send full description, sketch and price.

Cranes.—Office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C.—Opening of bids for furnishing four term and four chamber cranes (Circular No. 467) has been postponed from October 7

to October 17. F. C. Boggs, Captain, Corps of Engineers, U. S. A., General Purchasing Officer. (Further facts recently mentioned.)

Drills.—Leopold Stern, Cobalt, Ontario, Canada, wants diamond drills to bore 500 feet; casing, etc.

Drying-rooms.—See "Steel Cellings."

Drykilns.—R. F. Shedden, English-American Building, Atlanta, Ga., wants drykilns. (See "Brick Plant.")

Electrical Equipment.—See "Pumping Plant."

Electrical Equipment, etc.—Bids will be received at office of John W. Abercrombie, president University of Alabama, University, Ala., until October 24 for furnishing engineering laboratory and power-plant equipment for engineering building; also for furnishing materials and constructing central heating system. Detail specifications and bidding sheets can be obtained on application and plans inspected at office of Mr. Abercrombie.

Electric-light Plant.—Ben L. Jones, Macon, Ga., wants electric-light plant, complete; 150 lights.

Electric Machinery.—People's Co-operative Laundry Co., 919 Maison Blanche Building, New Orleans, La., wants electric motor power for operating laundry. (See "Laundry Machinery.")

Electric-light System.—Union Central Light & Ice Co., Hubbard City, Texas, is prepared to negotiate for financing and construction of extension of system to four towns surrounding Hubbard City, to furnish electric light, power, etc.; will issue \$75,000 of bonds.

Engine.—Machinery Exchange, Fayetteville, N. C., wants second-hand 15-horse-power engine.

Engine.—R. F. Shedden, English-American Building, Atlanta, Ga., wants engine for brick plant.

Engine.—Madison Milling & Manufacturing Co., Madison, Ga., wants 65 to 75-horse-power standard engine.

Engine.—O. R. Whitney, 39-41 Cortlandt street, New York, wants Corliss engine, about 1500 horse-power, suitable for 125 pounds steam, complete with all fittings; prompt delivery; give full particulars f. o. b. cars point of delivery.

Engine.—Paris Box & Manufacturing Co., Paris, Texas, in market for engine.

Engine.—See "Hoisting Engine."

Engine.—See "Gas Engine."

Engine.—J. H. Bailey, Hartwell, Ga., wants 15-horsepower engine. (See "Sawmill Equipment.")

Engines.—See "Irrigation Plant."

Excelsior Machinery.—Perfection Mattress Co., Birmingham, Ala., wants prices on excelsior machinery.

Farm Wagons.—See "Motor Vehicles."

Felt.—Geo. M. Crider, care of Crittenden Company, Marion, Ky., wants names and addresses of manufacturers of felt.

Files.—Tateish Trading Co., Sajiro Tateish, president, No. 10 Sojurocho, Kiohashiku, Tokio, Japan, wants to deal in American files; invites samples, export prices and commission.

Gas Engine.—J. B. Cox, Ft. Lauderdale, Fla., wants new or second-hand gas engine.

Gas Engines.—C. Behlen, 72 Trinity place, New York, may need gas engines. (See "Air Compressors.")

Glass Front.—H. F. Lange, Lagrange, Texas, wants glass front for store building of 34-foot front.

Grading.—Wise Granite Co., Wise, N. C., wants to correspond with grading contractors prepared to bid on 20,000 yards earth embankment at Green Pond, S. C.

Grading.—City of Greenville, Texas, will receive bids until November 3 for graduation of an earth embankment reservoir, containing about 90,000 cubic yards. Copies of plans and specifications and proposal sheets can be seen at City Secretary's office at Greenville, or at office of John W. Maxcy, Houston, Texas; certified check, \$500; Joseph F. Nichols, Mayor; Maxcy & Horton, engineers in charge, Houston, Texas.

Granite Work.—Commissioners District of Columbia (H. R. F. Macfarland, Henry L. West and Jay J. Morrow), Washington, D. C., will receive bids until October 16 for granite work for Union Station plaza improvements, Washington. (See "Iron Work.")

Hardware.—A. M. Walkup, Richmond, Va., will require bolts, washers, etc., for coal pier decking; delivery at Norfolk.

Heating Plant.—Baxter-Granfield Construction Co., Arlington court, San Antonio, Texas, invites bids on steam-heating plant for \$25,000 apartment-house.

Heating Plant.—S. K. McKee, general sec-

retary Y. M. C. A., Richmond, Va., will receive bids until October 20 on heating new Y. M. C. A. building; information, plans, etc., obtainable from S. & P. A. Davis, architects, 1000 Chestnut street, Philadelphia, Pa.

Heating System.—John W. Abercrombie, president University of Alabama, University, Ala., will receive bids until October 24 for furnishing materials and constructing central heating system. (See "Electrical Equipment, etc.")

Hoisting Engine.—Norfolk Hardwood Co., Inc., Norfolk, Va., wants small double-cylinder, single-drum hoisting engine; about 65x cylinders; without boilers; second-hand.

Iron Flagstaff.—Proposals will be received at office of Paul E. Divine, treasurer Mountain Branch, N. H. D. S., National Soldiers' Home, Tennessee, until October 26 for labor, material and construction of 100-foot iron flagstaff; plans, etc., at office of treasurer.

Iron Work.—Bids will be received at office of Commissioners District of Columbia (H. B. F. Macfarland, Henry L. West and Jay J. Morrow), Washington, D. C., until October 16 for ornamental iron work for Union Station plaza improvements, Washington, D. C. Forms of proposals, specifications, drawings and necessary information may be obtained from chief clerk engineer department, Room 427 District Building, Washington. Drawings may be obtained from same source on deposit of \$10.

Iron Work, etc.—Baxter-Granfield Construction Co., Arlington court, San Antonio, Texas, invites bids on tin and galvanized-iron work for \$25,000 apartment-house.

Irrigation Plant.—Del Monte Irrigation Co., Abram Texas, invites manufacturers to send bids specifying clearly just what they propose to supply, giving prices delivered f. o. b. cars at Mamie, Texas, on St. Louis, Brownsville & Mexico Railway; 28-foot maximum lift; 18-inch horizontal double-suction centrifugal pump; horizontal direct-connected, also belt-driven and rope-driven, engine (will select one of the three); one horizontal tubular boiler; two feed pumps, brass fitted; one vacuum pump, suited to engine; 150 feet main steam line with extra heavy fittings and covering; 120 feet of pipe one inch in excess of exhaust of engine; nine elbows, one tee, one automatic relief valve, all for exhaust pipe; horizontal swing check valve; one ejector for priming pump; all necessary steam fittings and pipes for pumps and ejectors; extra cut-off on each steam line at boiler; valves must be of Lunkenheimer make or as good; necessary lubricators for engine and feed pumps; smoke-stack suited to boiler with necessary guys; 22½-degree ell for suction, two inches in excess of suction; 85 feet of suction and 50 feet of discharge pipe two inches in excess of pump; one flap valve for discharge; give prices on black iron pipe and also on spiral riveted galvanized pipe; six-ply rubber belt 80 feet long with laces, etc.; closed heater for boiler feed. Send specifications for settings plans showing how plant should be erected.

Laboratory Equipment.—See "Electrical Equipment, etc."

Laundry Machinery.—People's Co-operative Laundry Co., 919 Maison Blanche Building, New Orleans, La., wants prices on equipment for large laundry, including boiler and pumps for drying, and electric motor.

Letter-box Fasteners.—Bids will be received at office of Purchasing Agent of Postoffice Department, Washington, D. C., until October 15 for furnishing letter-box fasteners as they may be ordered for use of Postal Service during term beginning December 1, 1908, and ending June 30, 1909. Blanks for proposals, with specifications and instructions to bidders, will be furnished on application to Purchasing Agent for Postoffice Department, Washington, D. C.; G. V. L. Meyer, Postmaster-General.

Levee Construction.—United States Engineer Office, Vicksburg, Miss. Sealed proposals for about 123,000 cubic yards of levee work on Red river and about 80,000 cubic yards on Mississippi river will be received until November 3; information on application; Clarke S. Smith, Captain of Engineers.

Levee Construction.—Bids will be received at office of St. George Richardson, Shelby county engineer, Memphis, Tenn., until October 10 for building levee across Fletcher creek bottom, on Bartlett and White Station road, and building levee across same creek bottom, on Bartlett and Germantown road, both in Seventh district, about two miles from Bartlett, Tenn.; require about 4000 yards of earth each; certified check \$50. Plans and specifications can be seen at office of County Engineer.

Locomotive.—J. H. Macleary, Suffolk, Va., wants 42-inch-gauge locomotive; direct connected or geared; weight from 7 to 10 tons;



name dealer's price f. o. b. Suffolk, Va., and quickest delivery.

**Locomotive.**—Oconee Brick & Tile Co., Milledgeville, Ga., wants light locomotive, 18 or 20 tons weight, Porter type.

**Locomotive.**—Donigan & Barret, Louisville, Ky., want 8 to 10-ton 30-inch-gauge saddle-tank locomotive; state best price, condition, delivery, first letter.

**Lumber.**—A. M. Walkup, Richmond, Va., will require 600,000 to 700,000 feet merchantable long-leaf pine; delivery at Norfolk.

**Machine Tools.**—See "Splitting Shears."

**Metal Ceiling.**—R. L. Poindexter, Winston-Salem, N. C., wants metal ceiling.

**Mining Machinery.**—See "Drills."

**Miscellaneous Equipment.**—Bids will be received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until October 26 for furnishing piston pump, plate-straightening machine, generators and engines, electrical supplies, etc. Blanks and general information relating to Circular No. 472 may be obtained at above office or offices of assistant purchasing agents, 24 State street, New York; Customhouse, New Orleans; 1086 North Point street, San Francisco, Cal.; also from U. S. Engineer office in following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville, Mobile and Galveston; Business Men's League, Kansas City; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma, Wash.; F. C. Boggs, Captain, Corps of Engineers, U. S. A., General Purchasing Officer.

**Miscellaneous Supplies.**—Bids will be received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until November 2 for furnishing steel, iron, steel rails, angle bars, tie plates, rail braces, iron and steel pipe, steam churn drills, pneumatic hoists, pipe-threading machine, geared shaper, motor-driven grinder, electric drills, bandsaws, planer jacks, cutting and milling tools, chain blocks, etc. Blanks and general information relating to Circular No. 473 may be obtained at above office or offices of assistant purchasing agents, 24 State street, New York; Customhouse, New Orleans; 1086 North Point street, San Francisco, Cal.; also from U. S. Engineer office in following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville, Mobile and Galveston; Business Men's League, Kansas City; Chamber of Commerce, Quincy, Ill.; Chamber of Commerce and Board of Trade, Tacoma, Wash.; F. C. Boggs, Captain, Corps of Engineers, U. S. A., General Purchasing Officer.

**Motor Vehicles.**—L. J. Kopke, 1068 Liberty avenue, Beaumont, Texas, wants to correspond with manufacturers of motor wagons for farm truck.

**Naval Supplies.**—Bids will be received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until October 13 to furnish at Naval Academy, Annapolis, Md., quantity of naval supplies, as follows: Schedule 403—Electrical conductor, conduit and supplies; Schedule 404—Vices, bolts and nuts, hardware and tools; Schedule 405—Allyard grease, crayons, protractors, globe, pipe fittings. Applications for proposals should designate schedules desired by number. Blank proposals will be furnished upon application to Navy Pay Office, Baltimore, Md., or to Bureau; E. B. Rogers, Paymaster-General, U. S. N.

**Oil-mill Machinery.**—Leon Edmundson, Raymond, Ga., wants prices on cottonseed-oil mill machinery.

**Oilers, etc.**—Dunn Machinery Co., 54 Marietta street, Atlanta, Ga., wants descriptive catalogues, lists and jobbers' discounts on engineers' oilers, trays and oil sets.

**Paving.**—City of Newport News, Va., will receive bids until November 2 for supplying and setting curbing, both granite and concrete curb and gutter, and for grading and paving and for curbing, grading and paving streets. Bids are asked for paving with sheet asphalt, bitulithic, block asphalt, vitrified brick, granitoid concrete-block pavement and macadam; sand and concrete foundations. Plans may be seen and instructions to bidders, form of proposals and specifications may be obtained on application to City Engineer. Bids to be addressed to Committee on Highways and Sewers, George E. Via, chairman; Floyd A. Hudgins, City Clerk.

**Paving.**—John Skain, Mayor, Lexington, Ky., will receive bids until October 24 for construction of South Ashland avenue with macadam, brick, bitulithic, wooden block or

asphalt; plans, profile and specifications on file in office of Mr. Skain.

**Paving.**—John B. Ashe, County Auditor, Houston, Texas, will receive bids until October 15 for paving four miles of Cedar Bayou road, three-quarter mile of Rudin road and half mile of Lynchburg and Crosby road.

**Paving.**—Board of Public Works, H. F. Van Dusen, chairman, Chattanooga, Tenn., will receive bids until October 13 for paving with either sheet asphalt, bitulithic or bituminous macadam, McCallie avenue, from Douglas street to Southern railway; separate bids will be received until same date for paving with vitrified brick McCallie avenue, from viaduct to Cemetery avenue; blank forms for proposals, contract and bond, with approximate quantities and specifications for asphalt and brick paving will be furnished on application; bidders for bitulithic or bituminous macadam will submit, with their bids, specifications for composition, thickness and methods of construction; certified check \$250, payable to T. J. Gillespie, City Treasurer.

**Pipe Covering.**—Tar River Lumber Co., Rocky Mount, N. C., wants quotations on quantity of steam pipe covering for 3, 3½, 4, 5 and 6 inches.

**Plumbing.**—David McC. McKell, Quartermaster, Fort Monroe, Va., will open bids October 19 for plumbing of post hospital. (See "Government and State Buildings.")

**Plumbing.**—S. K. McKee, general secretary Y. M. C. A., Richmond, Va., will receive bids until October 20 on plumbing for new Y. M. C. A. building; information, plans, etc., obtainable from S. & P. A. Davis, architects, 1600 Chestnut street, Philadelphia, Pa.

**Plumbing.**—Baxter-Granfield Construction Co., Arlington court, San Antonio, Texas, invites bids on plumbing for eight bathrooms.

**Pulp-mill Machinery.**—A. J. Mobley, Johnston, S. C., wants information on establishment of pulp mill to be operated by water-power; wants prices on pulp-mill machinery.

**Pumping Plant.**—Bids will be received at office of E. E. Davis, superintendent of water-works, Room 3, City Hall, Richmond, Va., until October 14 for furnishing and erecting machinery and apparatus for electric pumping plant, including four centrifugal pumps, each of 4,000,000 gallons capacity per day; four 200-horse-power electric motors, with necessary switchboard, wiring, pipes and water meters, as per plans and specifications on file at above office, copies of which can be obtained upon deposit of certified check for \$5; proposals for whole or any part of work to be accompanied by certified check for \$50; bids to be addressed to Committee on Water.

**Pumps.**—See "Irrigation Plant."

**Pumps.**—See "Laundry Machinery."

**Rails.**—Oconee Brick & Tile Co., Milledgeville, Ga., wants 25 tons 40-pound relay rails.

**Rails.**—See "Brick Plant."

**Reinforced Cement Roof.**—See "Steel Frame."

**Roofing.**—See "Steel Frame."

**Roofing.**—R. L. Poindexter, Winston-Salem, N. C., wants tin roofing.

**Rails.**—Selma Lumber Co., Selma, N. C., in market for one-half to one mile of 30-pound relaying steel rails; prompt shipment.

**Rubber Tips.**—Geo. M. Crider, care of Crittenden Company, Marion, Ky., wants names and addresses of manufacturers of rubber tips for chairs.

**Sash and Window Frames.**—H. F. Lange, Lagrange, Texas, wants fireproof sash and window frames.

**Sawmill Equipment.**—J. H. Bailey, Hartwell, Ga., wants No. 1 sawmill, boiler and 15-horsepower engine by November 1.

**Saws.**—Hodges & Starns, Johnson, La., want prices on 50-inch circular saw, inserted teeth, and 20-inch cut-off saw.

**Saw.**—Machinery Exchange, Fayetteville, N. C., wants small second-hand 26 to 30-inch land saw.

**Saw.**—Fayetteville, N. C.—The Machinery Exchange, Fayetteville, N. C., wants 46 to 48-inch seven or eight-gauge bolting saw; inserted-tooth preferred.

**Saws.**—Freyer Trunk Manufacturing Co., 210 Crawford street, Houston, Texas, wants prices on second-hand circular and resaw.

**Sewer Construction.**—Bids are invited until October 19 for construction of two separate extensions of sanitary sewer system of Florence, Ala., according to plans and specifications on file in office of City Engineer; bids to cover installation of private sewer connections with main system of those parties who may request city to make same; certified check \$250, to be filed with J. B. White, City Clerk; A. E. Walker, Mayor.

**Sewer Construction.**—F. H. Thomas, City Clerk, Monroe, La., states that date of opening bids for construction of sewer system, advertised as October 7, has been postponed until further notice.

**Sewer Construction.**—Commissioners of Sewerage (P. L. Atherton, chairman, and Charles P. Weaver, secretary-treasurer), Equitable Building, Louisville, Ky., will receive bids until October 16 for construction of Breckinridge-street sewer, contract No. 13, and until October 21 for construction of section "E," southern outfall sewer, contract No. 14. Former work consists mainly of building concrete sewer as follows: 1223 feet 54 inches diameter; 480 feet 51 inches diameter; 484 feet 45 inches diameter; average depth of cut, 13.4 feet; about 740 cubic yards concrete; latter consists mainly of building plain and reinforced-concrete sewer as follows: 1965 feet 12-foot 3-inch section; 1519 feet 12-foot section; average depth of cut, 27 feet; about 5510 cubic yards of concrete. Plans and specifications at office of commissioners. Each bid to be accompanied by certified check for at least 7 per cent. of amount. J. B. F. Reed, chief engineer.

**Sewing Machine.**—Farmers' Oil & Fertilizing Co., Dawson, Ga., wants to correspond with manufacturers of machine to stitch bed comforts.

**Skidding Machine.**—J. H. Maclear, Suffolk, Va., wants 7 or 7½-inch x 10-cylinder D. C. D. skidding machine (second-hand preferred).

**Skylights.**—H. F. Lange, Lagrange, Texas, wants skylights.

**Splitting Shears.**—D. L. Casey Machine Co., Springfield, Ohio, wants splitting shears, half-inch plate capacity.

**Sprocket Wheels.**—I. E. Sisk, 1920 North 13th street, Fort Smith, Ark., wants one dozen small sprocket wheels, not over ½-inch diameter, with three-eighths-inch bore, and two-foot chain to match same.

**Steam Specialties.**—See "Immigration Plant."

**Steel.**—Bids will be received at office of J. J. Glanfield, architect, Tulsa, Okla., until October 10 for reinforced steel to be used in erection of three eight-room school buildings; plans and specifications on file with Mr. Glanfield.

**Steel Frame.**—John E. Ray, principal State School for Blind and Deaf, Raleigh, N. C., wants bids on steel frame for tile roof, or reinforced cement roof for tile.

**Steel Reinforcement.**—H. F. Lange, Lagrange, Texas, wants reinforcement for concrete girders.

**Steel Ceilings.**—Sealed proposals will be received at office of treasurer, Southern

Branch, N. H. D. V. S., National Soldiers' Home, Virginia, until November 5 for labor and material for steel ceilings, Governor's quarters and barracks Companies I, K and L, and for installation of intercommunicating telephone system in hospital (building No. 39) and for furnishing and installing metal drying-rooms in main laundry (building No. 13) and hospital laundry (building No. 19) in accordance with instructions and specifications, copies of which, with blank proposals and other information, may be had upon application to John T. Hume, treasurer.

**Tank.**—See "Water-works."

**Telephone System.**—See "Steel Ceilings."

**Telephone Equipment.**—Godley Independent Telephone Co., Godley, Texas, wants telephone equipment.

**Trucks.**—See "Cars."

**Typewriters.**—Carmelo Cassar, 26-29 Str. Stretta, Valletta, Malta, wants prices on typewriters.

**Vault Doors.**—A. J. Moore, secretary Agricultural and Mechanical College, Agricultural College, Miss., wants prices on vault doors.

**Water-wheel.**—R. L. Martin, Ocala, Fla., wants to correspond with manufacturers of Poncelet water-wheel.

**Water-works.**—Ben L. Jones, 611 3d street, Macon, Ga., wants small water supply (including tank) for clubhouse.

**Well Drilling.**—Bids will be received at office of City Secretary, Sherman, Texas, until October 19 for boring of two 8¼-inch wells, about 800 feet deep; specifications on file with P. C. Thurmond, City Engineer; C. E. Craycroft, Mayor.

**Well Drilling.**—Water-Works Commission (S. D. Camden, president, C. D. Forrer, secretary), Union Trust Building, Parkersburg, W. Va., will receive bids until October 12 for drilling test and observation wells; specifications on file at office of Water-Works Commission or at Auditor's office, City Hall. Estimate of approximate quantities: One 12-inch test well, 150 linear feet; two 4-inch observation wells, 150 linear feet; pumping 12-inch test well 10 days; leaving 12-inch casing in ground 150 feet; leaving 4-inch casing in ground 150 feet. Certified check, \$300.

**Well Drilling.**—Clarksdale, Miss., will receive bids for deep six-inch well, 150 gallons flow, until October 9; M. W. Purnell, City Clerk.

**Woodworking Machinery.**—Freyer Trunk Manufacturing Co., 210 Crawford street, Houston, Texas, wants prices on planers and molders for trunk factory.

**Woodworking Machinery.**—See "Box Machinery."

## INDUSTRIAL NEWS OF INTEREST

### C. R. Robinson With Lackawanna Co.

C. R. Robinson, formerly sales agent for the Inland Steel Co. of Chicago, resigned October 3 to accept the position of Chicago representative of the Lackawanna Steel Co. of New York, under the title of district sales agent; offices in the Commercial National Bank Building, Rooms 1726-1728, Chicago.

### Concrete Driveway Floor.

The Turner Construction Co., 11 Broadway, New York, has received contract from the New York Central & Hudson River Railroad, G. W. Kittredge, chief engineer, for the construction of the driveway floor between the postoffice and the northeast wing of the Grand Central Station at Depew place, New York city.

### Manufacturing Plant for Sale.

A complete factory plant at Joplin, Mo., is offered for sale. It comprises 50x150-foot brick building, machine shop, patterns for gas and gasoline and oil engines, machine tools, 12-ton traveling crane, etc. It is stated that a modern equipment is in position. Full details can be obtained from the Miner's Gas Engine & Manufacturing Co. at Joplin.

### The Hughes Well-Drilling Contracts.

In calling attention last week to the Hughes Specialty Well Drilling Co.'s contracts for wells in Florida it was erroneously stated that the wells are to produce 5000 gallons of water daily. The supply will be 500 gallons per minute. The company's main offices are at Charleston, S. C.

### James Clark, Jr., & Co.

Messrs. James Clark, Jr., & Co. have found it necessary to occupy an entire building in order to accommodate their increasing trade in electrical supplies and the Willey dynamo which they manufacture. They have re-

moved to 526 West Main street, Louisville, Ky., where correspondence can be addressed or personal inquiries made for electrical equipment.

### The Machinery Exchange.

The Machinery Exchange, Fayetteville, N. C., has been established for the purpose of dealing in all kinds of new and rebuilt machinery for saw, shingle and lath mills, boilers, engines, belting, pulleys, shafting and other mechanical supplies. J. C. Humphrey is the manager, and brings to the new enterprise an experience of many years on the road in placing mechanical equipments.

### Increasing Orders for Keystone Pulleys.

Large specifications have been received recently for Keystone pulleys by the Pennsylvania Steel Pulley Co., Pittsburgh, Pa. These specifications came with the company's regular orders, which show a decided increase during the past 30 days and has necessitated an increase of output. This has resulted in the company's plant being operated close to its normal capacity.

### The M. H. Crane Estate.

In a description published in the Manufacturers' Record some time ago of the great lumber plant at Bogalusa, La., the Crane Company of Chicago was inadvertently referred to as having installed the steamfitting. This name should have read the M. H. Crane Estate, Security Building, Chicago, Ill., whose business is that of piping contractors, making a specialty of power stations and industrial plants.

### Reinohl Engineering Supply Co.

The Reinohl Engineering Supply Co. has been formed to act as manufacturer's agent for steam, gas and other engines, and electrical supplies. This company will also

undertake general contracting, including the installation of electric dynamos and motors, steam and gas engines and other plants. Its offices are at 912 F street N. W., Washington, D. C., and David W. Reinohl is general manager.

#### A Tennessee Farm Offered.

The Fairview farm in Sumner county, near St. Blaise Station, three miles from Gallatin, Tenn., is offered for sale. It comprises 2000 acres of rich agricultural land, residence, barns with 24 box stalls, 24 paddocks, tenant-houses, water-works, etc. A public sale will be held on November 18. For further details address G. I. Wadley & Co. or Davis-Cockrell-Finnegan Company, Nashville, Tenn., or W. G. Schamberger, Gallatin, Tenn.

#### To Exhibit Quick Dumpers for Road Work.

Among the interesting exhibits to be presented at the Good Roads Congress in Greensboro, N. C., beginning October 13, will be the Chicago quick dumper. This dumper is made to fit any gear with a reach, and is an especially useful equipment for the roads contractor who aims to do his work with efficiency and economy. It is manufactured by the Black Manufacturing Co., 124 East Ohio street, Chicago, Ill.

#### Caisson Piers for Foundations.

Contract has been awarded for the construction of the caisson piers for the foundations of the First National Bank building, Fifth avenue and Wood street, Pittsburg, Pa. It has been given to The Foundation Company of 115 Broadway, New York, the general contractor being James L. Stuart of Pittsburg, and the building construction being in charge of Messrs. D. H. Burnham & Co. of Chicago. This is the second office building in Pittsburg in which pneumatic caissons have been used for the foundations.

#### The Hardy-Bechtel Electric Co.

The Hardy-Bechtel Electric Co. has been formed, with offices in the Empire Building, Atlanta, Ga., and will continue the enterprise heretofore conducted under the name of the George P. Hardy Electric Co. George P. Hardy is president and Thomas F. Bechtel is secretary and treasurer of the new organization. This company announces that Mr. Bechtel becomes affiliated with the management of the new company, coming from Detroit, Mich., where for a score of years he was closely identified in an official capacity with the electric-light and power business.

#### Virginia Iron & Steel Specialty Co.

Building is active in and around Norfolk, Va., and manufacturers' representatives in that city are in a position to introduce building products to advantage. Among the progressive companies in touch with the architects, contractors and builders of that section is the Virginia Iron & Steel Specialty Co., 300 Board of Trade Building, Norfolk. This company quotes prices on all kinds of building materials—structural steel, roofs, ventilators, elevators, skylights, stairways, grills, office railings, etc., and invites correspondence from manufacturers desiring representation.

#### Dyeing Machine for Industrial Schools.

The Klauder-Weldon Dyeing Machine Co. of Amsterdam, N. Y., recently presented to the Columbus (Ga.) public schools a sample dyeing machine, which was placed in the Secondary Industrial School of Columbus. Appreciating this gift, the trustees of the schools have passed resolutions thanking the Klauder-Weldon Company and resolving further that the trustees hope to evidence a more substantial appreciation of the gift in making this school the initial step in the establishment of a great industrial educational institution not only for Columbus and Georgia, but for the entire South.

#### Enlarging Its Chemical Plant.

Owing to increased demand for its product, the Massachusetts Chemical Co. is building a factory addition, comprising 15,000 square feet of floor space, for its tape department. This company's friction tapes have become well known to the electrical trade for their durability, chemical neutrality, adhesiveness and moisture-proof qualities. They are high-class insulating products offered to meet the most exacting requirements as to temperature changes and exposure to deteriorating influences. The Massachusetts Chemical Co. is located at Walpole, Mass., and its manufactures include cable cloth, splicing compounds, transformer cement, molded rubber goods, etc.

#### Nash-Christian Foundry Supply Co.

The Nash-Christian Foundry Supply Co. of Birmingham, Ala., has incorporated with \$30,000 capital stock and continues the Nash Foundry Supply Co., which has been in existence for eight years. Its plant has been enlarged three times in that period, increasing from a 25-horse-power to a 350-horse-power engine. In incorporating the company adds \$15,000 to its capital and elects L. A. Christian as secretary-treasurer, and D. W. Nash is president. This company has one of the most complete foundry-facings plant in the country and its trade is entirely in the South and Southwest. Its products include heavy-machine plumbago, sea coal and all kinds of facings for foundries.

#### Link-Belt Company Contracts.

The Link-Belt Company, Nictown, Philadelphia, Pa., reports orders recently booked and work under way for sugar conveyors and elevators, three contracts, in Cuba; elevating and conveying machinery for soda in Delaware; phosphate rock and miscellaneous machinery at four different locations in Florida; locomotive coaling stations, belt conveyor, retail coal pockets, conveyor for wood refuse in New York; coal-pocket machinery in Ohio; conveyors and elevators for fuel-testing plant, apron conveyor at coke plant, car haul at coal mine, coal-crushing machinery for coal and coke company, coal pocket for retail yard, large "Monobar" conveyor at coal mine in Pennsylvania, and car hauls and coal chutes in West Virginia.

#### The T. L. Smith Company.

The T. L. Smith Company, Majestic Building, Milwaukee, Wis., late in last February purchased the Contractors' Supply & Equipment Co., 305 Old Colony Building, Chicago, it being understood that the Contractors' Supply & Equipment Co. should solicit no new business and settle up its affairs as soon as possible. For a time all business at the Chicago office was transacted in the name of the old company, the advertising being carried in the joint names of the two companies. On August 28, in pursuance of this arrangement, the T. L. Smith Company took full charge of the office at 305 Old Colony Building, where it is now selling Smith mixers and Symons crushers. A. N. Fitzsimmons has succeeded George C. Marsh as sales manager of the T. L. Smith Company and as manager of the Chicago office.

#### Two Important Irrigation Contracts.

Two contracts awarded to J. G. White & Co., Inc., 43-49 Exchange place, New York, involve reclaiming of 700,000 and 150,000 acres of arid land in Southern Idaho. On the first-named contract (for F. H. Buhl of Sharon, Pa.) White & Co. will provide reservoir sites and enlargement of Twin Falls canal (developed by Mr. Buhl) sufficiently to carry increased water supply and extension of main canals to cover the land, including a syphon to carry water across Salmon River canyon, 1650 feet wide, with a bed 500 feet below level of canal. The 150,000-acre proposition is for the Idaho Irrigation Co. It will consist of a storage dam, four diversion dams, four main channels, each leading to one of the tracts of land into which the project is divided, and the complete system of distribution and drainage ditches for irrigation. The storage dam will form a reservoir of more than 150,000 acre-feet capacity, and is to be built in the channel of Big Wood river canyon, and is to be about 115 feet high, of rock-fill type with concrete core. The diversion dams (two in channel of Big Wood river and two in channel of Little Wood river) are relatively small structures of sufficient height to raise water to level of canals. Aggregate length of main canals will be more than 75 miles, varying in capacity in proportion to areas of tracts to be irrigated. Largest canal will have capacity of about 760 second feet. Distributing canals and ditches built over entire area will reach every quarter section of land. The above work will cost approximately \$3,000,000.

#### TRADE LITERATURE.

##### Ulmer's Leather Belting.

The Ulmer Leather Co. of Norwich, Conn., is issuing its catalogue and cipher code of Ulmer's leather belting for the transmission of power. This company's products have become well known among engineers and power users, a special product being the Alpha chrome tanned leather belting for oily, wet and gaseous places.

##### A Goulds Pump Booklet.

Goulds pumps are manufactured for every service, and in a current booklet the manufacturer describes briefly and illustrates the Goulds combination house force pumps,

which embody factors resulting in efficiency and economy when in operation. The Goulds Manufacturing Co., Seneca Falls, N. Y., is the manufacturer referred to.

#### The Northern Type "S" Motors.

The Northern type "S" motor is described in detail, the text being accompanied by photographic views, in Bulletin 59 issued by the Northern Electrical Manufacturing Co., Madison, Wis. This motor is noted for its constant and adjustable speed. It is built open, semi-enclosed and enclosed, for mill and factory service. These equipments cover radical changes in machine design and operation in electrical motors.

#### Some Portland Cement Information.

Timely information relative to Portland cement is presented in the Universal Portland Cement Co.'s monthly bulletin No. 53. This publication includes descriptions and photographic views of fences, dock foundations, warehouses, silos, chimneys, pavements, residences, etc., where reinforced concrete was adopted. In all the work considered the company's product was used. The Universal Portland Cement Co. has plants at Chicago and Pittsburg. Its daily output being 17,000 barrels.

#### Small Power-Driven Compressors.

Small power-driven air and gas compressors that have proven their ability to operate economically in various kinds of industrial plants and elsewhere are described in catalogue No. EE-36, issued by the Ingersoll-Rand Company, 11 Broadway, New York. Full descriptions are presented, together with many photographic views, enabling prospective buyers of compressors to determine just what the Ingersoll-Rand machines will accomplish. For many years compressors of the company's design and construction have been used throughout the world, and exacting buyers of compressors can find Ingersoll-Rand equipments to meet any need. The company is also distributing two booklets containing timely information regarding pneumatic pumping systems and rock-excavating machinery.

#### Wunner's Bitumen-Emulsion Waterproofing.

There are many advantages obtained from waterproofing the walls of a building, including increase in safety, life and healthy appearance of the structure, wholesome conditions and comfort to the occupants. In this connection architects and contractors should not fail to become acquainted with the data presented in a booklet now being distributed by the U. S. Waterproofing Co., St. James Building, New York. The booklet tells of Wunner's bitumen-emulsion waterproofing, a compound used in making walls of cement, brick or stone permanently impervious to water. It is applied by mixing a small quantity of bitumen-emulsion in ready-made cement, mortar or cement concrete.

#### Steel Ribs and Lagging.

Patented steel ribs and lagging for the construction of bridge piers, retaining walls, dams, concrete foundations, concrete arches and reinforced-concrete buildings of every description are well-known products of Geo. W. Jackson, Inc. The Jackson patented ribs and lagging for use as forms in building construction are fully described, the text being accompanied by many photographic views and diagrams, in a catalogue now being distributed. This publication announces that contractors will find it to their advantage to adopt these steel ribs and lagging for work where concrete is used, as the appliances may be used over and over on different kinds of work without any appreciable loss in value. Prices and terms are submitted on receipt of plans and specifications. The offices of Geo. W. Jackson, Inc., are at 175 West Jackson boulevard, Chicago, and 46 Wall street, New York.

#### Modern Coal-Handling Machinery.

Interesting and timely information, accompanied by numerous photographic views regarding coal-handling machinery, is presented in the George Haiss book. This tells about the modern machinery and appliances for coal handling designed and constructed by a company that has had many years of practical experience in meeting the exacting conditions of service to which this class of machinery is exposed. The Haiss apparatus is also adapted to handling other classes of material besides coal, and especially attention is called to the adaptability of the bucket for handling phosphate, fertilizer and other similar materials. The new type of shaftless revolving screen, the automatic drum for balancing the trolley of a boom hoist, and the improved type of push and

cable cars embody features worth investigation by those interested. The George Haiss Manufacturing Co., 141st street and Rider avenue, New York, is the manufacturer of the machinery mentioned.

#### Southern-Built Woodworking Machinery.

Of several lines of machinery largely in demand in the South because of the development of natural resources woodworking equipments are among the most noticeable. As the development of timber lands and the erection of sawmills and woodworking factories increased the demand for the machinery needed, the Southern machine manufacturers gave their attention to woodworking machinery. The Newman Machine Co. of Greensboro, N. C., has been prominent in this direction. This company offers improved machines for woodworking, including molding machines, lath blinder and trimmer, swing cut-off saw, planer, matcher and molder, lath mill and bolter, double cut-off saw, hand planer or jointer, single surfacer or finishing planer, self-feed gang ripping machine or double-edger, etc. Descriptions and photographic views of the Newman woodworking machines can be obtained by addressing the company.

#### A Book for Business Men.

"A Better Day's Work" is the title of a 160-page book on business systems and book-keeping short-cuts issued by the Burroughs Adding Machine Co., Detroit, Mich., and dedicated to "The Man at the Desk." This book contains over 50 specific systems for various lines of business, in addition to a number of entirely new bookkeeping "short-cuts." Each system is explained in detail, showing exactly how and why it may be used to save time, work and worry. The book is profusely illustrated with reproductions of actual forms used in representative business houses, presenting a graphic picture of business as it is done today in the largest and smallest enterprises. A feature of the book is the introduction—a quaintly-written but strictly accurate historical sketch relating to the development of book-keeping and business practice from the days of the "Stone Age." Successive eras in the evolution of this particular branch of human activity are presented in a series of drawings. To procure a copy write the Burroughs company, indicate your employment or business connection and state where you noted the reference to the book.

#### For New Orleans Assemblies.

[Special Cor. Manufacturers' Record.]  
New Orleans, La., October 3.

Success of the Manufacturers' Exhibition just closed has suggested that it be repeated annually, and that suggestion has broadened into the feasibility of building a great auditorium for large gatherings here. The writer interviewed a number of representative, progressive men in the city on this subject, and all are united in the opinion that New Orleans should have such a building. Philip Werlein, president of the Progressive Union; M. B. Trezevant, secretary of the Progressive Union; Sam Blum, chairman of the Committee of One Hundred; Albert Baldwin, president of the New Orleans National Bank, and Mayor Martin Behrman, among others, all seemed enthusiastic in the opinion that a creditable building can easily be built. Such a building will do much for the city. We could, with such, invite the large conventions of the country to the city; could make it attractive for large musical organizations and other amusement organizations that must play to large attendance to justify their coming. Kansas City's splendid convention hall is one of the best, if not the best advertisement of that city, and every dollar of its cost—something over \$250,000—was given by the people of the town. Every citizen of that progressive city is proud in the possession of more or less Convention Hall stock; and what has been done in Kansas City can be done here in New Orleans. EDW. O. WILD.

If you wish to keep posted on the progress of the South, read the  
**MANUFACTURERS' RECORD.**  
Price \$4 a year.



## PROPOSALS INVITED FOR CONSTRUCTION WORK.

Details regarding construction work, proposals invited, etc., noted in the following list, will be found in this and recent issues of the MANUFACTURERS' RECORD and the DAILY BULLETIN OF THE MANUFACTURERS' RECORD.

\* Indicates that the item has appeared in our "Miscellaneous, Proposals and Supplies Wanted" department.

Date to open bids.  
(When date is  
not given it has  
not been fixed.)

## BRIDGES, CULVERTS, VIADUCTS.

	Published in Daily Bulletin	Manu- facturers' Record
*Walhalla, S. C.	Sept. 12	Sept. 17
*Steel or Cable Bridge, Cheraw, S. C.	Sept. 22	Sept. 24
*Three Steel Bridges, Ellberton, Ga.	Sept. 25	Oct. 1
*Chappells, S. C.	Oct. 1	Oct. 8
*Reinforced Concrete Bridge, Montgomery, Ala.	Oct. 2	Oct. 8
*Steel Bridge, Charlotte County, Virginia	Oct. 6	Oct. 8
*Steel Bridge, Spartanburg, S. C.	Oct. 6	Oct. 8
*Steel Bridge, Batesville, Ark.	Oct. 7	Oct. 8

## MISCELLANEOUS CONSTRUCTION WORK.

Oct. 9	*Wharf and Seawalls, Dauphin Island, Ala.	Sept. 5	Sept. 10
Nov. 17	*Lock and Dam, Mobile, Ala.	Sept. 12	Sept. 17
Oct. 1	*Dam, Versailles, Ky.	Sept. 13	Sept. 24
Oct. 14	*Levee, Vicksburg, Miss.	Sept. 19	Sept. 24
Oct. 19	*Levee, West Memphis, Ark.	Sept. 22	Sept. 24
Oct. 15	*Levee, New Orleans, La.	Sept. 25	Oct. 1
Oct. 17	*Wharf and Dredging, Norfolk, Va.	Sept. 25	Oct. 1
Oct. 7	*Levee, English, Ark.	Sept. 29	Oct. 1
	*Irrigation System, Abram, Texas.	Oct. 5	Oct. 8
Nov. 3	*Levee Work, Vicksburg, Miss.	Oct. 7	Oct. 8

## ROAD AND STREET IMPROVEMENTS.

Oct. 10	*Sidewalks, Raleigh, N. C.	Sept. 18	Sept. 24
Nov.	*Concrete Sidewalks, Atlanta, Ga.	Sept. 23	Sept. 24
Oct. 9	*Paving, etc., Charleston, W. Va.	Sept. 26	Oct. 1
Oct. 13	*Grading and Macadamizing, Hagerstown, Md.	Sept. 26	Oct. 1
Oct. 6	*Sidewalks, etc., Ozark, Mo.	Sept. 29	Oct. 1
Oct. 24	*Macadam, etc., Lexington, Ky.	Oct. 5	Oct. 8
Nov. 2	*Grade, Curb, Newport News, Va.	Oct. 6	Oct. 8
Oct. 13	*Asphalt, etc., Chattanooga, Tenn.	Oct. 7	Oct. 8
Oct. 15	*Road Work, Houston, Texas.	Oct. 7	Oct. 8

## SEWER CONSTRUCTION.

Oct. 14	*Additional Contracts on Municipal System, Baltimore, Md.; over \$1,000,000.	Sept. 15	Sept. 17
Oct. 19	*Sewerage System, Oakland, Md.	Sept. 18	Sept. 24
Oct. 10	*Sewer, Raleigh, N. C.	Sept. 18	Sept. 24
	*Sanitary Sewers, Winston, N. C.	Sept. 19	Sept. 24
Oct. 9	*Additional Contract on Municipal System, Louisville, Ky.	Sept. 25	Oct. 1
Oct. 9	*City System, Charleston, W. Va.	Sept. 26	Oct. 1
Oct. 16	*Add'l Contract on Municipal System, Louisville, Ky.	Oct. 3	Oct. 8
Oct. 19	*Sewer Extension, Florence, Ala.	Oct. 7	Oct. 8

## WATER-WORKS.

	Extension Mains, Fitzgerald, Ga.	July 14	July 16
	System for School, Conway, Ark.	July 22	July 23
	*Richlands, Va.	July 27	July 30
Oct. 10	*System, Alba, Mo.	Sept. 13	Sept. 24
Oct. 19	*System, Oakland, Md.	Sept. 18	Sept. 24
	*System, Marcelline, Mo.	Sept. 21	Sept. 24
Oct. 15	*Pumping Station, Brownville, Texas.	Sept. 22	Sept. 24
Oct. 15	Water-works Improvements, Sherman, Texas.	Sept. 23	Sept. 24
Oct. 14	*Electric Pumping Plant, Richmond, Va.	Oct. 1	Oct. 8
Oct. 12	*Drilling Wells, Parkersburg, W. Va.	Oct. 5	Oct. 8
Oct. 19	*Drilling Wells, Sherman, Texas.	Oct. 6	Oct. 8

## BANK AND OFFICE BUILDINGS.

	National City Bank, Birmingham, Ala.	July 28	July 30
	First National Bank, Coeburn, Va.	Aug. 12	Aug. 13
Feb.	Middletown Savings Bank, Middletown, Md.	Aug. 24	Aug. 27
Oct. 15	Audubon Hotel Co., New Orleans, La.	Aug. 31	Sept. 3
Nov. 1	State Bank Building, Little Rock, Ark.	Sept. 14	Sept. 17
Nov. 1	W. C. Cleveland, Greenville, S. C.	Sept. 17	Sept. 24
Oct. 17	Empire Construction Co., Birmingham, Ala.	Sept. 18	Sept. 24
Oct. 7	Interstate Trust Co., Cumberland, Md.	Sept. 21	Sept. 24
Oct. 10	Chamber of Commerce Building, Birmingham, Ala.	Sept. 24	Oct. 1
Nov. 10	J. C. Luke, Ocala, Ga.	Oct. 5	Oct. 8

## CHURCHES.

	First Baptist Church, Paris, Ky.	July 13	July 16
	Washington, D. C., \$50,000.	Aug. 3	Aug. 6
	Hopkinsville, Ky.	Aug. 19	Aug. 20
Oct. 10	Clifton Forge, Va.	Sept. 19	Sept. 24
	Green Cove Springs, Fla.	Sept. 22	Sept. 24
Oct. 15	Littleton Baptist Church, Littleton, N. C.	Oct. 1	Oct. 8

## COURTHOUSES.

	Martinsburg, W. Va.	July 16	July 16
Nov. 3	Springfield, Ga.	Sept. 2	Sept. 3
Oct. 19	Summerville, Ga.	Oct. 5	Oct. 8
Nov. 3	Springfield, Ga.	Oct. 7	Oct. 8

## GOVERNMENT AND STATE BUILDINGS.

Oct. 9	*Reinforced Concrete Buildings, Fort Howard, Md.	Sept. 9	Sept. 10
Oct. 30	U. S. Postoffice, etc., Carthage, Mo.	Sept. 24	Oct. 1
Oct. 10	Ironclad Storehouse, Leon Springs, Texas.	Sept. 30	Oct. 1
Nov. 4	U. S. Postoffice, etc., Marietta, Ga.	Oct. 2	Oct. 8

## HOTELS.

	Coleman-Fulton Pasture Co., Gregory, Texas.	Sept. 9	Sept. 10
	Hermitage Hotel Co., Nashville, Tenn.	Sept. 10	Sept. 17
Oct. 25	Quincy Hotel Co., Quincy, Fla.	Oct. 5	Oct. 8

Date to open bids.  
(When date is  
not given it has  
not been fixed.)

## MISCELLANEOUS STRUCTURES.

Jan. 1	Anahuac, Texas; plans, not bids.	Aug. 11	Aug. 13
	Miller Store Co., Knoxville, Tenn.	Aug. 29	Sept. 3
	Jail, Brunswick, Ga.	Sept. 9	Sept. 10
Oct. 15	Jail, Brunswick, Ga.	Sept. 14	Sept. 17
Oct. 10	Administration Building, Lexington, Ky.	Sept. 18	Sept. 24
Oct. 10	Elks' Home, Lagrange, Ga.	Oct. 1	Oct. 8
Oct. 17	J. C. Luke, Ocala, Ga.	Oct. 5	Oct. 8
Oct. 10	T. K. Tierce, Birmingham, Ala.	Oct. 6	Oct. 8
Oct. 16	Orphanage, Timberville, Va.	Oct. 7	Oct. 8

## MUNICIPAL BUILDINGS.

Oct. 14	Additional Cells, Jail, Baltimore, Md.	Sept. 26	Oct. 1
Oct. 22	City Hall, Chickasha, Okla.	Oct. 7	Oct. 8

## SCHOOLS.

Oct. 24	University, Ala.; plans, not bids.	Sept. 12	Sept. 17
Oct. 15	Norfolk, Va.	Sept. 15	Sept. 17
	Lexington, Va.	Sept. 21	Sept. 21
Oct. 15	Norfolk, Va.	Sept. 21	Sept. 24
Oct. 15	Portsmouth, Va.	Sept. 22	Sept. 24
Jan.	Nixon, Texas.	Sept. 23	Sept. 24
Oct. 15	College Station, Texas.	Sept. 30	Oct. 1
Oct. 15	Graymont, Ala.	Sept. 30	Oct. 1
	Raleigh, N. C.; plan, not bids.	Sept. 30	Oct. 1
Oct. 30	Houston, Texas.	Oct. 1	Oct. 8
Oct. 15	Quitman, Miss.	Oct. 6	Oct. 8

## Want a Furniture Factory.

The people of Leander, Texas, want a furniture factory established in that little city. It is stated that the location is in a territory where mahogany and other hardwoods can be obtained in abundance. Manufacturers who may want to investigate are invited to address C. A. Bainbridge at Leander.

The bibliographical catalogue of the books, pamphlets and periodicals of the celebrated Latimer-Clark collection presented by Dr. Schuyler Skants Wheeler to the American Institute of Electrical Engineers has just been completed, and is about to go to press. This critical catalogue has been in preparation for the past six years under the direction of Mr. W. D. Weaver, with the collaboration of Brother Potamian of Manhattan College and a number of other authorities here and abroad. As soon as the book comes from the press it will be distributed to the members of the institute, who, according to the deed of gift of the library, are entitled to the catalogue.

The Electric Trunk Line Age, published monthly by Muralt & Co., engineers, of New York, has completed its first year. The publication is in the interest of the electrification of trunk line railroads and appeals to a wide range of readers, railroad men of all classes from the superintendent to the director and banker, supply men, etc. It is a vehicle of information as to installations in this country and abroad, and a medium for a terse discussion of the problems of the operation of railroads by electric motor power.

The annual report of the Sewerage Commission of Baltimore, embracing the operations in the calendar year 1907, presents in detail facts about the work accomplished and is especially interesting because of its half-tone illustrations of the various kinds of constructions involved in the great sanitary undertaking.

A practical exposition of lighting country homes by private electric plants is the subject of Bulletin No. 25, by T. H. Amrine, published by the Engineering Experiment Station of the University of Illinois at Urbana.

The Newport News Shipbuilding & Dry-Dock Co. was awarded the contract of \$620,000 each, for two of the 10 torpedo-boat destroyers authorized at the last session of Congress.

It is announced that a New Orleans sugar refinery will hereafter put up its 100-pound packages and its 25 and 50-pound packages in cotton sacks instead of burlap.

## FINANCIAL NEWS

The MANUFACTURERS' RECORD invites information about Southern financial matters. Items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

## Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,  
Baltimore, Md., October 7.

The Baltimore stock market during the past week was a little more active than usual of late, and prices displayed a disposition to improve. In the trading United Railways common sold at 10½; do. trust certificates, 10¼ to 10½; the income bonds from 51½ to 52½; the funding 5s from 78¾ to 79¾; the funding scrip at 79; United 4s from 84 to 85; Consolidated Gas 6s, 103; do. 5s, 110¼; Seaboard 4s, 54 to 55½; do. 10-year 5s, 91½; do. three-year 5s, 90; Consolidated Cotton Duck common, 5½; do. preferred, 23; Mt. Vernon-Woodberry Cotton Duck 5s, 74¼ to 76; G. B. S. Brewing incomes, 14¾ to 13¾.

Fidelity & Deposit sold at 125½; Safe Deposit & Trust, 437½; Maryland Casualty, 69 to 70.

Other securities were dealt in as follows: Northern Central Railway stock, 95; Atlantic Coast Line 4s, 94; Anacostia & Potomac 5s, 99 to 100½; do. (guaranteed), 100½ to 101½; City & Suburban 5s, Baltimore, 108¾; Norfolk Railway & Light stock, 17; do. 5s, bonds, 91¼ to 91½; Atlantic Coast Line of South Carolina 4s, 86; Baltimore City 3½s, 1930, 96½ to 97; do. do. 1940, 96½; do. 5s, 1916, 108¾; do. 3½s, 1928, 96¼; do. do. 1980, 92¾; do. do. 1935, 96½; United States Steel common, 45¼; Maryland Electric 5s, 95; Houston Oil common, 6 to 7; Wilmington & Weldon 4s, 96; Baltimore Electric 5s, stamped, 85; Charleston Consolidated Electric 5s, 87; South Bound 5s, 101; Western Maryland 4s, 75¼; Carolina Central 4s, 86; Hazard Wharf 1st 5s, 95; Western North Carolina 6s, 108¾; West Virginia Central 6s, 103½; Georgia & Alabama 5s, 99; Virginia Midland 5th 5s, 103½; Georges Creek Coal & Iron, 70; Atlantic Coast Line new 4s, certificates, 77; Colorado & Southern Refunding 4½s, 86½; Norfolk Street Railway 5s, 104; Union Pacific Refunding 4s, 95¼; Atlanta Consolidated Street Railway 5s, 104; Georgia, Carolina & Northern 5s, 102; Georgia Southern & Florida 5s, 104 to 105.

## SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended  
October 7, 1908.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast	100	88	89
Atlantic Coast of Conn.	100	...	225
Georgia Southern & Florida	100	19	19

Georgia South. & Fla. 1st Pfd.	100	75	83 1/2
Georgia South. & Fla. 2nd Pfd.	100	60	67 1/2
Norfolk Railway & Light.	25	17 1/2	17 1/2
Seaboard Co. Com.	100	64 1/2	8 1/2
Seaboard Co. 1st Pfd.	100	30	35
Seaboard Co. 2nd Pfd.	100	12 1/2	14
United Railways & Elec. Co.	50	10	10 1/2
Western Maryland.	50	5	5

<b>Bank Stocks.</b>			
Citizens' National Bank.	10	34	...
Far. & Mer. National Bank.	40	44 1/2	...
First National Bank.	100	125	135
German Bank.	100	103	159
Merchants' National Bank.	100	164 1/2	...
National Bank of Commerce.	15	25	...
National Exchange Bank.	100	154	160
National Howard Bank.	10	12 1/2	...
National Marine Bank.	30	38 1/2	...
National Mechanics' Bank.	10	25 1/2	...
National Union Bank of Md.	100	121	125
Western National Bank.	20	35	...

<b>Trust, Fidelity and Casualty Stocks.</b>			
Colonial Trust.	50	25 1/2	28
Fidelity & Deposit.	50	127	130
International Trust.	100	103	159
Maryland Casualty.	25	69 1/2	72
Merc. Trust & Deposit.	50	115	120
Union Trust.	50	60	...
U. S. Fidelity & Guaranty.	100	112	...

<b>Miscellaneous Stocks.</b>			
Ala. Con. Coal & Iron.	100	25	...
Con. Cotton Duck Com.	50	5	6
Con. Cotton Duck Pfd.	50	24 1/2	...
Con. Gas, Elec. Lt. & P. Com.	100	20	20 1/2
Con. Gas, Elec. Lt. & P. Pfd.	100	68	...
Consolidation Coal.	100	91	93
Fairmont Coal.	100	91	93
George's Creek Coal.	100	70	...

<b>Railroad Bonds.</b>			
Alabama Central 1st 6s.	100	108	109
Albany & Northern 5s, 1945.	90	...	...
Atlanta & Charlotte Ext. 4 1/2s.	90	...	...
Atlantic Coast Line 1st 4s, 1952.	94 1/2	94 1/2	...
Atlantic Coast Line 4s, Cfs, 1952.	77 1/2	80	...
Atlantic C. L. Com. 4s, Cfs, 5-20s.	80	82 1/2	...
Atlantic C. L. (Conn.) 4s, Cfs.	80	...	...
Carolina Central 4s, 1949.	86	...	...
Charlotte, Col. & Aug. 1st 5s, 1910.	102 1/2	104	...
Charlotte, Col. & Aug. 7s, 1910.	102 1/2	105	...
Georgia & Alabama 5s, 1945.	102 1/2	...	...
Georgia, Car. & North. 1st 5s, 1929.	101 1/2	102 1/2	...
Georgia Pacific 1st 6s, 1922.	111	...	...
Georgia South. & Fla. 1st 5s, 1945.	105 1/2	105 1/2	...
Maryland & Pennsylvania 4s, 1951.	90	...	...
Petersburg Class A 5s, 1926.	109	...	...
Petersburg Class B 6s, 1926.	114	...	...
Piedmont & Cum. 1st 5s, 1911.	95	...	...
Potomac Valley 1st 5s, 1911.	104	...	...
Richmond & Danville Gold 6s, 1915.	108 1/2	109 1/2	...
Sav. Fla. & West. 5s, 1931.	110	...	...
Seaboard Air Line 4s, 1950.	54 1/2	55	...
Seaboard Air Line 5s, 10-year, 1911.	91	92 1/2	...
Seaboard Air Line 5s, 3-year.	90 1/2	91 1/2	...
Seaboard & Roanoke 6s, 1926.	103	103 1/2	...
South Bound 5s, 1941.	101	101 1/2	...
Southern Railway Co. 5s, 1934.	101 1/2	104	...
Virginia Midland 4th, 1921.	100	...	...
Virginia Midland 5th 5s, 1929.	102	103 1/2	...
Virginia Midland G. M. 5s.	105 1/2	106 1/2	...
Washington Terminal 3 1/2s.	90 1/2	...	...
Western Maryland 4s, 1952.	75 1/2	75 1/2	...
Western N. C. Con. 6s, 1914.	108	108 1/2	...
W. Va. Cent. 1st 6s, 1911.	103	104	...
Wil. Col. & Aug. 6s, 1910.	103 1/2	...	...

<b>Street Railway Bonds.</b>			
Anacostia & Potomac 5s, 1919.	101	102	...
Atlanta Con. Street Railway 5s.	100	...	...
Augusta Ry. & Elec. 5s, 1940.	95 1/2	100	...
Balto. Trac. (N. B. Div.) 5s, 1942.	113 1/2	...	...
Central Ry. Ext. 5s (Balto.) 1932.	100 1/2	...	...
Charleston Con. Elec. 5s, 1909.	85	90	...
City & Suburban 5s (Balto.), 1922.	108 1/2	...	...
City & Suburban 5s (Wash.), 1948.	100	...	...
Knoxville Traction 1st 5s, 1928.	101	...	...
Lake Roland Elevated 5s, 1942.	113	113 1/2	...
Lexington Railway 1st 5s, 1949.	88	85	...
Macon Ry. & Lt. 1st Con. 5s, 1953.	84	...	...
Maryland Electric Railway 5s.	95 1/2	95 1/2	...
Norfolk Railway & Light 5s.	91 1/2	91 1/2	...
Norfolk Street Railway 5s, 1944.	103	104 1/2	...
United Railways 1st 4s, 1949.	84 1/2	85	...
United Railways Inc. 4s, 1949.	51 1/2	52	...
United Railways Funding 5s.	78 1/2	79 1/2	...

#### Miscellaneous Bonds.

Atlanta Gas 1st 5s, 1917.	101	...	...
Baltimore Brick 5s.	86	...	...
Baltimore Electric 5s.	85	86	...
Consolidated Gas 6s, 1910.	103	...	...
Consolidated Gas 5s, 1939.	110	111 1/2	...
G. B. S. Browning 1st 4s.	42 1/2	44	...
G. B. S. Browning Inc. 4s.	15	13 1/2	...
Maryland Telephone 5s.	89	...	...
Mt. Vernon-Woodby Cot. Duck 5s.	75	75 1/2	...
United Elec. Lt. & P. 4 1/2s.	90 1/2	...	...

#### SOUTHERN COTTON-MILL STOCKS.

##### Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending October 5.

	Bid.	Asked.	
Abbeville Cotton Mills (S. C.)	80	...	...
Alken Mfg. Co. (S. C.)	82	...	...
American Spinning Co. (S. C.)	145	150	...
Anderson Cotton Mills (S. C.)	70	...	...
Arkwright Mills (S. C.)	100	110	...
Augusta Factory (Ga.)	65	70	...
Avondale Mills (Ala.)	115	125	...
Belton Mills (S. C.)	115	...	...
Bliss Mfg. Co. (Ga.)	114	...	...
Brandon Mills (S. C.)	120	130	...
Cabarrus Cotton Mills (N. C.)	85	...	...
Chadwick-Hoskins (N. C.) Pfd.	102	...	...
Chiquola Mfg. Co. (S. C.)	125	...	...
Clifton Mfg. Co. (S. C.)	102	108	...
Clifton Mfg. Co. (S. C.) Pfd.	99 1/2	103	...
Clinton Cotton Mills (S. C.)	120	...	...
Columbus Mfg. Co. (Ga.)	98	...	...
Courtenay Mfg. Co. (S. C.)	97 1/2	...	...
Dallas Mfg. Co. (Ala.)	90	...	...
Darlington Mfg. Co. (S. C.)	70	76	...
Drayton Mills (S. C.)	100	...	...
Eagle & Phenix Mills (Ga.)	125	137 1/2	...
Easley Cotton Mills (S. C.)	145	150	...
Enoree Mfg. Co. (S. C.)	69	78	...
Enoree Mfg. Co. (S. C.) Pfd.	100	...	...
Enterprise Mfg. Co. (Ga.)	82	90	...
Exposition Cotton Mills (Ga.)	240	...	...
Gaffney Mfg. Co. (S. C.)	67	72	...
Gainesville Cotton Mills (Ga.)	48	...	...
Granby Cot. Mills (S. C.) 1st Pfd.	45	...	...
Granville Mills (S. C.)	90	...	...
Greenwood Cotton Mills (S. C.)	111	118	...
Grendel Mills (N. C.)	160	175	...
Henrietta Mills (N. C.)	160	175	...
King Mfg. Co., John P. (Ga.)	97	102	...
Lancaster Cotton Mills (S. C.)	110	125	...
Lancaster Cot. Mills (S. C.) Pfd.	91	96	...

Langley Mfg. Co. (S. C.)	91	96	...
Laurens Cotton Mills (S. C.)	141	148	...
Limestone Mills (S. C.)	85	...	...
Lockhart Mills (S. C.)	97	...	...
Lockhart Mills (S. C.) Pfd.	90	92	...
Loray Mills (N. C.) Pfd.	90	92	...
Marlboro Cotton Mills (S. C.)	80	...	...
Mayo Mills (N. C.)	165	185	...
Mills Mfg. Co. (S. C.)	105	106	...
Mills Mfg. Co. (S. C.) Pfd.	109	110	...
Monaghan Mills (S. C.)	95	100	...
Monarch Cotton Mills (S. C.)	145	...	...
Newberry Cotton Mills (S. C.)	120	...	...
Norris Cotton Mills (S. C.)	80	...	...
Olympia Cot. Mills (S. C.) Pfd.	90	98	...
Orangeburg Mfg. Co. (S. C.) Pfd.	104	106	...
Orr Cotton Mills (S. C.)	150	...	...
Pacolet Mfg. Co. (S. C.)	97	100	...
Pacolet Mfg. Co. (S. C.) Pfd.	168	175	...
Pelzer Mfg. Co. (S. C.)	120	124	...
Poe Mfg. Co. (S. C.)	120	124	...
Richland Cot. Mills (S. C.) Pfd.	45	...	...
Raleigh Cotton Mills (N. C.)	190	...	...
Roanoke Mills (N. C.)	175	...	...
Saxon Mills (S. C.)	120	125	...
Sibley Mfg. Co. (Ga.)	62 1/2	64 1/2	...
Spartan Mills (S. C.)	135	145	...
Springstein Mills (S. C.)	100	...	...
Tucapau Mills (S. C.)	195	...	...
Trilon Mfg. Co. (S. C.)	140	...	...
Union-Buttola Mills (S. C.) 1st Pfd.	54	60	...
Victor Mfg. Co. (S. C.)	120	130	...
Warren Mfg. Co. (S. C.)	92	93 1/2	...
Warren Mfg. Co. Pfd.	100	...	...
Washington Mills (Va.)	25	...	...
Washington Mills (Va.) Pfd.	100	110	...
Whitney Mfg. Co. (S. C.)	140	...	...
Williamson Mills (S. C.)	100	103	...
Wiscasset Mills (N. C.)	125	135	...
Woodruff Cotton Mills (S. C.)	119	123	...
Woodside Cotton Mills (S. C.)	102	104	...

##### Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending October 5.

	Bid.	Asked.	
Abbeville Cotton Mills (S. C.)	75	...	...
Alken Mfg. Co. (S. C.)	82	...	...
American Spinning Co. (S. C.)	145	150	...
Anderson Cotton Mills (S. C.)	70	...	...
Arcadia Mills (S. C.)	90	...	...
Arkwright Cotton Mills (S. C.)	100	110	...
Augusta Factory (Ga.)	65	70	...
Avondale Mills (Ala.)	115	125	...
Belton Mills (S. C.)	115	...	...
Bliss Mfg. Co. (Ga.)	114	...	...
Brandon Mills (S. C.)	120	130	...
Cabarrus Cotton Mills (N. C.)	85	...	...
Chadwick-Hoskins (N. C.) Pfd.	102	...	...
Chiquola Mfg. Co. (S. C.)	125	...	...
Clifton Mfg. Co. (S. C.)	102	108	...
Clifton Mfg. Co. (S. C.) Pfd.	99 1/2	103	...
Clinton Cotton Mills (S. C.)	120	...	...
Columbus Mfg. Co. (Ga.)	98	...	...
Courtenay Mfg. Co. (S. C.)	97 1/2	...	...
Dallas Mfg. Co. (Ala.)	90	...	...
Darlington Mfg. Co. (S. C.)	70	76	...
D. E. Converse Co. (S. C.)	112	...	...
Drayton Mills (S. C.)	100	...	...
Eagle & Phenix Mills (Ga.)	125	137 1/2	...
Easley Cotton Mills (S. C.)	145	150	...
Enoree Mfg. Co. (S. C.)	69	78	...
Enoree Mfg. Co. (S. C.) Pfd.	100	...	...
Enterprise Mfg. Co. (Ga.)	82	90	...
Exposition Cotton Mills (Ga.)	240	...	...
Gaffney Mfg. Co. (S. C.)	67	72	...
Gainesville Cotton Mills (Ga.)	48	...	...
Granby Cot. Mills (S. C.) 1st Pfd.	45	...	...
Granville Mills (S. C.)	90	...	...
Greenwood Cotton Mills (S. C.)	111	118	...
Grendel Mills (N. C.)	160	175	...
Henrietta Mills (N. C.)	160	175	...
King Mfg. Co., John P. (Ga.)	97	102	...
Lancaster Cotton Mills (S. C.)	110	125	...
Lancaster Cot. Mills (S. C.) Pfd.	91	96	...
Langley Mfg. Co. (S. C.)	91	96	...
Laurens Mills (S. C.)	141	148	...
Lockhart Mills (S. C.)	85	...	...
Lockhart Mills (S. C.) Pfd.	97	...	...
Loray Cotton Mills (S. C.) Pfd.	90	92	...
Marlboro Cotton Mills (S. C.)	80	...	...
Mills Mfg. Co. (S. C.)	105	106	...
Molton Mfg. Co. (S. C.)	92	...	...
Monaghan Mills (S. C.)	145	...	...
Monarch Cotton Mills (S. C.)	120	...	...
Newberry Cotton Mills (S. C.)	145	...	...
Ninety-Six Cotton Mills (S. C.)	110	...	...
Norris Cotton Mills (S. C.)	120	...	...
Odell Mfg. Co. (N. C.)	90	...	...
Orr Cotton Mills (S. C.)	104	...	...
Pacolet Mfg. Co. (S. C.)	97	100	...
Pacolet Mfg. Co. (S. C.) Pfd.	168	175	...
Pelzer Mfg. Co. (S. C.)	120	124	...
Piedmont Mfg. Co. (S. C.)	118	125	...
Poe Mfg. Co., F. W. (S. C.)	120	124	...
Saxon Mills (S. C.)	118	125	...
Sibley Mfg. Co. (Ga.)	62	64 1/2	...
Spartan Mills (S. C.)	135	145	...
Trilon Mfg. Co. (Ga.)	132	140	...
Tucapau Mills (S. C.)	200	...	...
Union-Buttola Mills (S. C.) 1st Pfd.	54	60	...
Victor Mfg. Co. (S. C.)	120	130	...
Warren Mfg. Co. (S. C.)	92	93 1/2	...
Warren Mfg. Co. (S. C.) Pfd.	100	...	...
Washington Mills (Va.)	25	...	...
Washington Mills (Va.) Pfd.	100	110	...
Whitney Mfg. Co. (S. C.)	140	...	...
Williamson Mills (S. C.)	100	103	...
Wiscasset Mills (N. C.)	125	135	...
Woodruff Cotton Mills (S. C.)	119	123	...
Woodside Cotton Mills (S. C.)	100	104	...
Watts Mills (S. C.)	90	100	...
Williamson Mills (S. C.)	102	...	...

#### New Corporations.

Arnett, Okla.—The Farmers and Merchants' Bank has been incorporated with \$10,000 capital by L. L. Stine, B. O. Stine, H. H. Stallings and D. H. McPherson of Woodward, O. E. Kirtley of Higgins, Texas; Eugene Kile of Pawnee.

Baltimore, Md.—The Montrose Perpetual Building Association has been incorporated with \$100,000 capital by George Jenkins, John G. Haydon and Austin Jenkins Lilly.

Baltimore, Md.—The Workingmen's Loan and Savings Association, capital \$250,000, has been incorporated by Philip

S. Kramer, Isaac Lebowitch, Julius Nachman, Julius Lipstein and Max Krulowitzky.

Baltimore, Md.—The Securities Corporation, capital \$10,000, has been incorporated by Edward C. Carrington, Jr., Campbell Carrington and James Hewes.

Baltimore, Md.—The Maryland Mortgage Co. has been incorporated with \$50,000 capital by S. Tagart Steele, John E. Semmes, Jr., and Jesse N. Bowen.

Charlottesville, Va.—The Albemarle National Bank has been authorized to begin business; capital \$100,000. L. T. Hancel is president; R. T. W. Duke, vice-president; R. T. Martin, cashier. This is a conversion of the Bank of Albemarle.

Chattanooga, Tenn.—The Eureka Industrial Co., capital \$1000, has filed articles of incorporation. T. R. Craig, T. A. Hatfield, Robert L. Dawson, C. E. Owens and Charles Brock are the incorporators.

Cochrane, Ala.—In a letter to the MANUFACTURERS' RECORD John T. Cochrane, president of the Alabama, Tennessee & Northern Railroad and the Tombigbee Valley Railroad companies, confirms the report that he is promoting a new bank, which will have an authorized capital of \$25,000, with \$15,000 paid in. No officers have been elected, but it is probable A. J. Staub, Jr., will be cashier. It is expected to be ready for business in about 30 days.



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**The Merchants National Bank**  
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 DOUGLAS H. THOMAS, President.  
 WM. INGLE, Vice-President and Cashier.  
 J. C. WANDA, Asst. Cashier.  
 JOHN B. H. DUNN, Asst. Cashier.  
 Capital, \$1,500,000  
 Surplus and Profits, - - - \$900,000  
 Deposits, \$12,000,000  
 Accounts of Banks, Bankers, Corporations and  
 Individuals solicited. We invite correspondence.

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 corporations, registration of stock,  
 and for acting as trustee in bond  
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 ence Invited.

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 Receives Deposits subject to Check,  
 and allows Liberal Rates of Interest  
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 A general banking business transacted.  
 Special attention given to collections.

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Hopkins Place, German and Liberty Sts.  
 Capital, \$1,000,000  
 July 15, 1908, Surplus and Profits, \$671,631.60  
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 SUMMERFIELD BALDWIN, Vice-Pres.  
 CHARLES W. DORSEY, Vice-Pres.  
 R. VINTON LANDDALE, Cashier.  
 WM. J. DELCHER, Asst. Cashier.  
 Accounts of Mercantile Firms, Corporations,  
 Banks, Bankers and Individuals Invited.

### MARYLAND TRUST COMPANY

BALTIMORE, MD.  
 CAPITAL.....\$2,000,000  
**OFFICERS:**  
 L. S. ZIAMERMAN.....Acting President  
 Carroll Van Ness.....Treasurer  
 Jarvis Spencer, Jr.....Asst. Treasurer  
 Ivan Skinner.....Asst. Secretary  
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 Deposits.....\$7,900,000  
 Resources.....\$13,850,913

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We invite correspond-  
 ence and personal inter-  
 views, and will be pleased  
 to furnish information to  
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**JOHN GILL, President.**

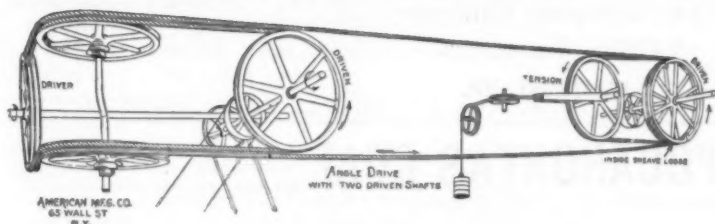
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### "American" Transmission Rope

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## TRANSMISSION ROPE

held, it is stated, to vote bonds for water-works system.

Cumberland, Md.—C. E. Dennison of Cleveland, Ohio, and Boston, Mass., has purchased at a premium of \$627.50 the \$100,000 of 5 per cent. refunding bonds.

Decatur, Texas.—Reports state that \$4250 of 5 per cent. 10-40-year water-improvement bonds have been purchased by the State sinking fund.

East Point, Ga.—An election is to be held October 28 to vote on \$50,000 of water-works, \$20,000 of sewer and drainage and \$15,000 of electric-light bonds.

Follansbee, W. Va.—The city has voted \$5000 of street bonds.

Franklin, Ky.—Weil, Roth & Co. of Cincinnati are reported to have purchased at private sale \$18,000 of 5 per cent. bonds of graded school district No. 1.

Gage, Okla.—Spitzer & Co. of Toledo are reported to have purchased \$20,000 of 6 per cent. 10-20-year school district bonds.

Guyandotte, W. Va.—Bids will be received until noon October 19 by V. H. Crites, Town Recorder, for \$26,000 of 5 per cent. 10-year paving and sewer bonds.

Guyon, Okla.—H. J. Gaff, City Clerk, will receive bids until October 15 for \$10,000 of 5 per cent. 20-year bonds.

Hawkinsville, Ga.—On November 4 an election is to be held to vote on \$15,000 of 5 per cent. 29-year electric light bonds. C. W. Harris is City Clerk.

Houston, Texas.—The city has purchased \$12,000 of Harris county road and bridge bonds.

Hugo, Okla.—The Oklahoma Bond & Trust Co. of Guthrie has purchased \$1800 of 6 per cent. bonds of school district No. 14.

#### Seaboard Air Line Railway Atlanta—Birmingham First Mortgage 4% Thirty-Year Gold Bonds

Referring to our previous notice, dated September 1, 1908, the Deposit Agreement has been prepared and filed with The Standard Trust Company of New York, the Depositary therein named.

Holders of the above bonds who desire to become parties to the agreement must deposit such bonds in negotiable form, carrying September 1, 1908, and all subsequent coupons, on or before the 20th day of October, 1908, with The Standard Trust Company of New York, 25 Broad Street, New York City, the Depositary, or with its Agent for that purpose, the Bank of Scotland, at its office in the City of Edinburgh, or at its office in the City of London.

Copies of the agreement may be obtained on application to the Depositary or its said Agent or to any of the undersigned.

Dated New York, September 23, 1908.

**WILLIAM SALOMON, Chairman;**  
**PAUL MORTON**  
**BENJAMIN S. GUINNESS,**  
**FREDERICK J. LISMAN,**

Committee.

**FREDERICK B. VAN VORST,**

Counsel.

**M. V. R. WEYANT, Secretary,**

25 Broad Street, New York City.

Kansas City, Mo.—It is reported that \$12,768.74 of the \$48,070.67 of park fund certificates, series S, have been purchased at 105 and accrued interest by Edwin C. Johnson of Kansas City.

Kennett, Mo.—Reports state that no sale was made September 3 of the \$19,449.19 bonds of drainage district No. 10 and the \$59,350.93 bonds of drainage district No. 12.

Kansas City, Mo.—Of the \$48,070.67 of 7 per cent. 1-20-year serial park certificates \$12,768.74 have been purchased at 105 by Edwin C. Johnston, Norwich, Conn.

Laurens, S. C.—Bids will be received by W. H. Gikerson, Clerk and Treasurer, until noon October 15 for \$24,000 of 5 per cent. 30-year street-improvement bonds recently voted.

Lawton, Okla.—A resolution has been passed by the School Board, it is stated, asking that on election be held to vote on \$100,000 of school district building bonds.

Lenoir City, Tenn.—John Nuveen & Co. of Chicago were awarded \$15,000 of 6 per cent. 30-year street and school bonds at \$300 premium.

Lexington, Ky.—An election is to be held November 3 to vote on \$25,000 of sewerage bonds. John Skain is Mayor.

Lula, Ga.—On October 20 an election will be held to vote on \$5000 of school-

building bonds. W. J. Dunson is Mayor.

Marlin, Texas.—Woodbine, McNear & Moore of Chicago have been awarded \$50,000 of 5 per cent. 10-40-year Falls county road and bridge bonds, which are approved and registered.

Mooreville, N. C.—The city has voted \$25,000 of street-extension and water-works and \$10,000 of school bonds.

Muskogee, Okla.—Reports state that an election will soon be held to vote on \$300,000 of sewer-extension and \$250,000 of water-works extension bonds.

Newport, Ky.—It is reported that the election which was to have been held in November to vote on \$100,000 of water-works bonds has been postponed.

Oklahoma City, Okla.—The School Board recently authorized an issue of \$300,000 of 25-year school district bonds, interest not to exceed 5 per cent., and it is stated an election will be held November 3 for this purpose.

Orange, Texas.—Reports state that \$15,000 of street improvement bonds are being offered for sale. Address ex-Mayor George W. Bancroft.

Palmetto, Fla.—The First National Bank of Columbus, Ohio, is reported to

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#### BRANCHES:

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asking that an election be held to vote on \$40,000 of school building bonds.

Roanoke, Va.—An ordinance is to be introduced in the City Council, it is reported, to vote on \$100,000 of sidewalk-improvement bonds.

Rockville, Md.—The \$20,000 of Montgomery county road bonds voted last June will, it is stated, soon be issued.

Shawnee, Okla.—An election is to be held November 3 to vote on \$120,000 of school district building bonds.

Shelby, N. C.—W. J. Edwards of Atlanta has purchased at par \$100,000 of the \$115,000 of 5 per cent. 30-year water-works bonds. It is stated the other \$15,000 have also been sold at par. J. F. Tiddy is city clerk.

Snyder, Okla.—School-district building bonds amounting to \$23,000 have been authorized.

Spartanburg, S. C.—John B. Cleveland has purchased \$186,000 of the \$230,000 of water-works bonds. The remaining \$44,000 have been reserved by the City Council to be bid on later.

Tulsa, Okla.—H. O. McClure, secretary Board of Education, will receive bids until 6 P. M. October 12 for \$125,000 of 5 per cent. 20-year school district building bonds. A previous report gave the date as October 15.

Tulsa, Okla.—On November 3 an election is to be held in Tulsa county to vote on a five-mill tax levy to raise \$200,000 for building a courthouse.

Tyler, Texas.—The State has purchased at par \$160,000 of 4 per cent. 40-year Smith county courthouse bonds.

Union Springs, Ala.—An election is to

be held in Bullock county November 3 to vote on road bonds.

Welch, W. Va.—A. J. Hood & Co. of Detroit have been awarded at \$250 premium the \$21,000 of 6 per cent. 10-30-year paving bonds.

Welch, W. Va.—A. J. Hood & Co. of Detroit have been awarded at \$250 premium the \$21,000 of 6 per cent. 10-30-year paving bonds.

Wheeling, W. Va.—Local reports state that the \$695,000 of 4 per cent. improvement bonds are to be readvertised. These securities were offered last July, but no satisfactory bids were received.

White Plains, N. C.—Bids will be received by Peter Paulding, village clerk, until 8 P. M. October 12 for \$155,000 of 30-year water and \$28,000 of five-year tax deficiency 4½ per cent. bonds.

Wilson, N. C.—It is reported that all bids received August 15 for \$15,000 of 5 per cent. 15-year electric-light improvement bonds were rejected.

At Brunswick, Ga., bids will be received until noon on December 1 for \$64,000 of 5 per cent. city bonds. Further particulars will be found in the advertising columns.

#### Financial Notes.

The Hillyer Investment Co. of Atlanta, Ga., has increased its capital to \$70,000, all of which is paid in, according to a letter to the MANUFACTURERS' RECORD. This, it is said, gives the company a capital and surplus of \$75,000.

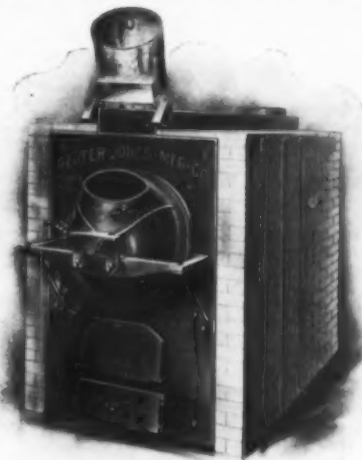
The committee of which William Salmon is chairman, representing holders of first mortgage 4 per cent. 30-year bonds

of the Atlanta-Birmingham division of the Seaboard Air Line, announces that the deposit agreement has been filed with the Standard Trust Co. of New York, and

bondholders desiring to become parties thereto must deposit bonds with that depository of its agents on or before October 20.

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